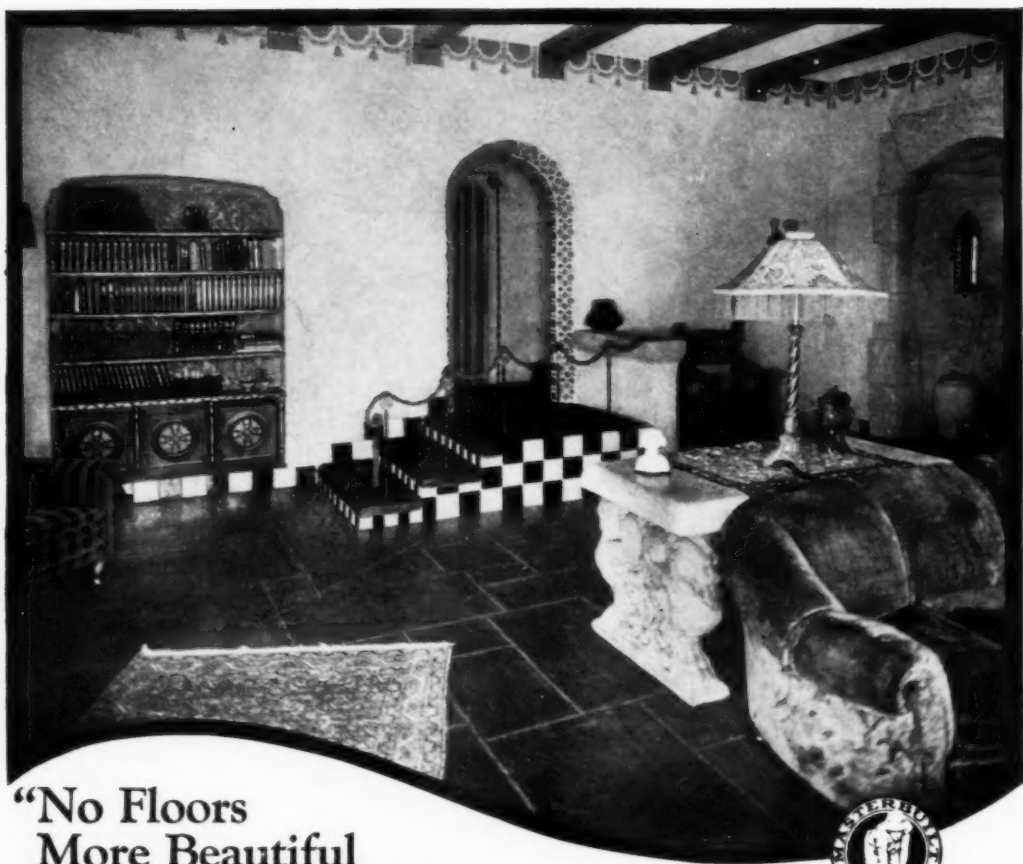


*The*  
ARCHITECTURAL  
RECORD



FEBRUARY 1927



## "No Floors More Beautiful Than Colormix Floors"

said this Los Angeles architect who used them over the entire first floor of his new home.

Colormix Concrete Floors are logical floors for residences, not only because they are beautiful and durable, but because they are fire safe, quiet, foot-sure—because they give a structural rigidity that eliminates the vibration from city traffic, and because they seal out smoke, dust and steam from furnace room and laundry.

Thousands of Colormix Floors in clubs, homes, office buildings, hospitals, theatres and department stores, etc., are giving proof of their universal adaptability.

Send for "The Story of Colormix Floors"

**THE MASTER BUILDERS COMPANY**  
CLEVELAND, OHIO

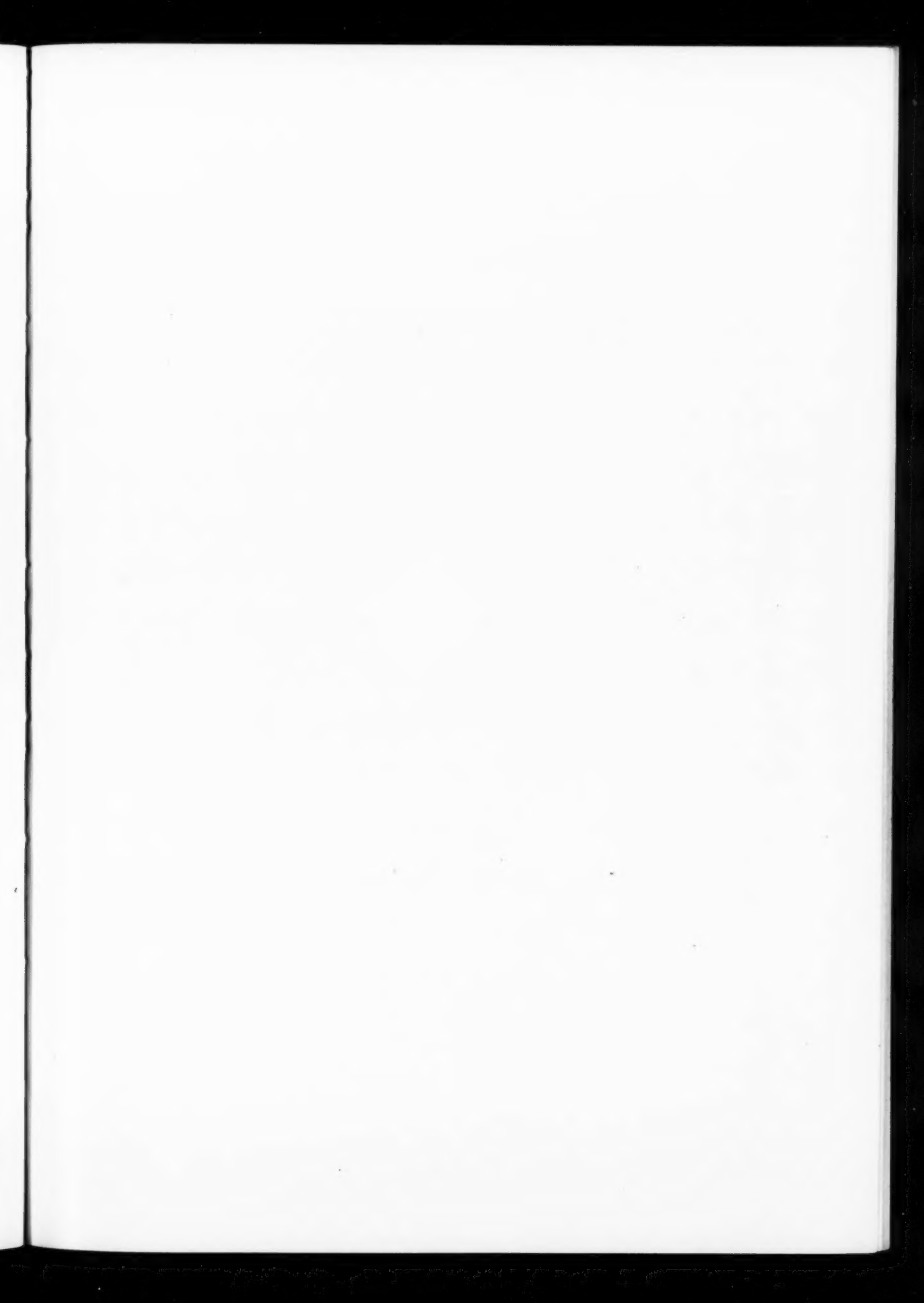
Sales Offices  
In One Hundred Cities

Factories at Cleveland  
and Irvington, N. J.

Because of their beauty and wear-ability, Colormix floors are used over the entire first floor of the residence of Kenneth McDonald, Jr., Los Angeles, Cal. Kenneth McDonald, Architect.

**DYCROME**  
DYCROME, by chemical reaction with the cement, produces surfaces in beautiful mottled colors with an unusual blending of variegated shades and tones, and hardens and dust-proofs as it beautifies. DYCROME is a perfected colored hardener for treating plain cement surfaces after they have been laid.

# COLORMIX FLOORS





A PANEL MADE BY A STUDENT OF MR. BEST MAUGARD'S, "A METHOD OF  
CREATIVE DESIGN" AFTER EIGHT HOURS' PRACTICE.



# The ARCHITECTURAL RECORD

VOLUME 61

FEBRUARY, 1927

NUMBER 2

## ↓ AN ALPHABET OF FORM

By  
*Claude Brayden*

"A METHOD FOR CREATIVE DESIGN," by Adolfo Best-Maugard, now at last available in English,\* is like a breath of fresh air in a cellar, the cellar being that condition of impotence and ape-like imitation into which the arts of design have fallen.

For fifteen years, we are told in the publisher's announcement, Mr. Best-Maugard worked upon the development of his "method," yet the discovery of it occurred quite accidentally. But here is one of the cases where "Man's accidents are God's purposes," for I believe that this young Mexican painter is a chosen agent for the restoration to man, in some measure, of his ancient birthright of direct and beautiful expression, through universal symbols, of his emotional life. Though this is only a private opinion, it has already some justification in fact, for in Mexico City alone, where Mr. Best-Maugard's system has been adopted, more than two hundred thousand students have studied design under this new, simple method, with the result that

it has already rejuvenated the native arts of Mexico.

In the year 1910, while collaborating with Professor Franz Boaz, of Columbia University, in an exhaustive research into the primitive forms of Toltec and Aztec decorative expression, Mr. Best-Maugard prepared over two thousand drawings from patterns found upon specimens of ancient pottery. As a result of this concentration of consciousness he discovered quite fortuitously that there was a common element of seven basic forms that in various combinations and applications were found without exception in all of the different patterns, and that these constituted the alphabet, as it were, of this ancient American art (Figure 1). More extended research throughout the libraries and museums of Europe developed the fact that the same thing was true of all primitive art-expression whatsoever. Approaching his subject from a different angle, Mr. Best-Maugard found that every one of these seven "letters" or motifs was derived from the logarithmic spiral form. This is a fact of enormous interest and im-

\* Alfred A. Knopf, publisher, 730 Fifth Avenue, New York.

- © THE SPIRAL — 1  
 ○ THE CIRCLE — 2  
 ~ HALF-CIRCLE — 3  
 ~ THE S-FORM — 4  
 ~ WAVY LINE — 5  
 ~ THE ZIGZAG — 6  
 — STRAIGHT LINE — 7

### THE SEVEN MOTIFS

FIG. 1

portance, which will be discussed more at length later on; meantime, what does he do with his seven forms, after he has found them, the reader will be wondering.

He gives them to the child—be he young or old—to play with, to arrange and combine according to his fancy, as though they were a set of building blocks, or an alphabet in very truth. And with what result? The development of patterns of the same kind and character as those produced by primitive man the world over.

This is in the nature of a game, but like all games, it is governed by certain rules. The first two are, according to their author, "Never cross lines, or allow one line to interfere with another, but let every line go on its way without touching the others," and, "When using one or more similar lines they should be drawn parallel, and at equal distances apart." The pupil is instructed in the four basic positions to be observed in drawing the seven motifs: horizontal, vertical, right-hand oblique, and left-hand oblique. From such simple lines and borders, made up of a few elements only, the pupil is encouraged to elaborate them, combining as many motifs as possible in making designs (Figure 2). Next he is shown how they may be used in

the construction of rosettes and flowers—that is, grouped around a center, instead of being extended in straight lines (Figure 3). All-over patterns come next in order, disposed according to some simple geometrical scheme, after which the pupil is made familiar with some of the fundamental laws of structure—the distribution and the play of forces, tangential growth, rhythmic increment and diminution, and the like. He applies these principles in the creation of flower, fish, animal and bird forms (Figures 3-8), and finally the human figure, with the seven motifs still within and behind them all. These new units he is encouraged to arrange and combine in a decorative manner according to the dictates of his will or fancy, to create on his own account, and express himself emotionally by these means. Also, as his ambition mounts, and his mastery increases, he is instructed in space and mass composition, color, light and shade, perspective; by

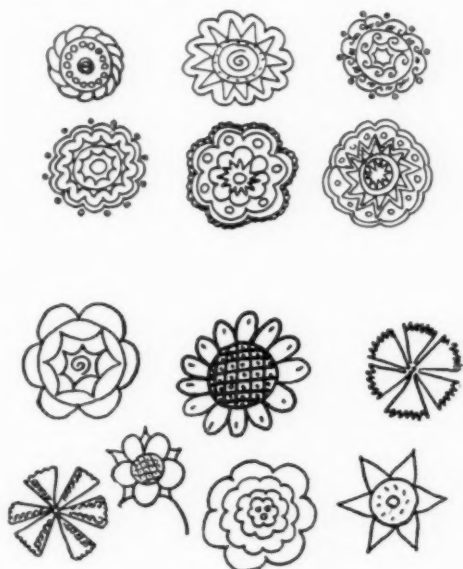


### ORNAMENTAL BORDERS

FIG. 2

these new knowledges enhancing and enriching some of the designs already developed in bare outline. As his work becomes more self-originate, the pupil discovers that he recaptures and returns to the part in the whole; the seven forms—some one of them, that is—become the basis of the entire composition: the egg produces the chicken!

Such, in bare outline, is Mr. Best-Maugard's "method." What are its peculiar merits? What accounts for its amazing success in practice? What justifies its author's hopes. To answer these questions it is necessary to ask others. Why do the most accomplished musical composers revert to folk-songs for the basic themes of their compositions, and why does the primitive art of the peasant and of the savage excite envious admiration in the most sophisticated studios and ateliers? It is the answer to questions such as these which will best give the reason for Mr. Best-Maugard's belief that he has discovered a way to an art-expression for the future through and by means of the earliest beginnings of the arts of the past.



### FLOWER FORMS

FIG. 3



### LEAF FORMS

FIG. 4

The consciousness which produced folk-music and peasant art, which painted the earthen pot and incised the ivory tusk is still so much a part of the consciousness of nature that it responds automatically and inevitably to nature's rhythms; it operates unerringly, therefore, with the same directness, economy, and mathematical "rightness" that is observable in the bird's nest, the spider's web, and the bee's honey-cell. The result is a necessitous beauty which is not so much man's as it is nature's own, for in the infancy of the race and of the individual man is still bound as it were by an umbilical cord to nature, so that her life flows into him and through him.

The development of free will, the power to reason, individuality, with all its disturbing complexities, destroys this link, and expression becomes ego-centric, self-conscious, personal, mental, thereby losing its unity, simplicity, directness—its cosmic quality, in point of fact. This may be recaptured on some higher arc of the evolutionary spiral, but the modern world, with its conflicting



PLANT-GROWTH

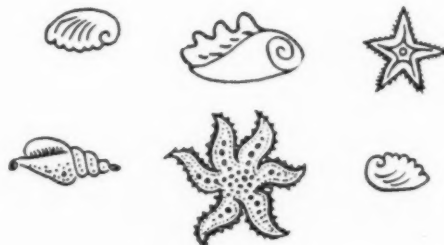
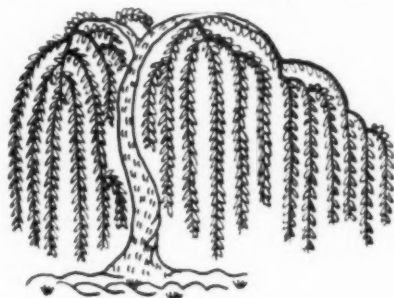
FIG. 5

claims, entangled interests, distracted by so many sorrows, has lost, amid the din of its machinery, the primal rhythm of life.

It is Mr. Best-Maugard's idea that within the limits of his chosen field of endeavor at least, we may first recapture, and then in our own way develop that rhythm by means of a reversion to this alphabet of form discovered in the art of primitive man. What makes this a not wholly unreasonable hope is that we have within us something of the child and something of the savage which recognizes, responds to, and subjectively understands this alphabet. Therefore by its aid from old beginnings we can perhaps proceed to some new end, self-consciously and with full understanding spinning our web of beauty, deliberately applying those unchanging and inevitable laws of form and structure which the child of nature followed unconsciously before he was poisoned by the heady juices of the brain.

To primitive man each of the seven

motifs was probably the glyph, or symbol of some thing or phenomenon familiar to him in nature. The scroll might very well have been an index of vortical motion, as observed in the whirlpool and elsewhere; the circle stood for the sun, and the half-circle the moon; the S shape might have represented to his imagination fire, the wavy line, the undulation of water; the zig-zag, lightning, and the straight horizontal line water when it is still. Though in the course of time these lost their special meanings, being employed merely as elements of decorative design, the original emotional reactions induced by the thing signified, through and by means of its sign or symbol, persisted in the subliminal self, that is, below the threshold of consciousness. And these deep feelings still persist: a straight horizontal line, and a vertical or oblique zig-zag, for example, stir us, however faintly, in a manner analogous in the one case to "waters stilled at even," and in the other, to an electric storm. At least the first has in it something of repose, and the other something of violence.

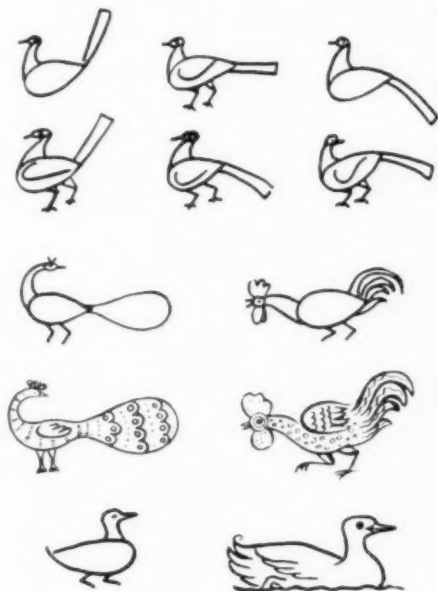


WILLOW TREE, SHELLS

FIG. 6

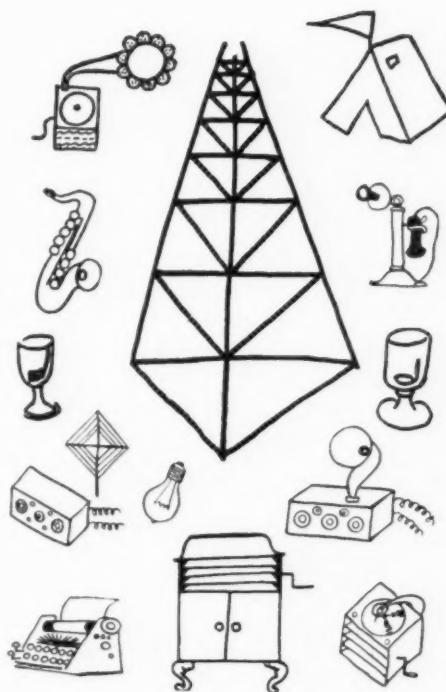
While it would be impossible and perhaps ridiculous to attempt to press these analogies far, and nothing would be gained by it, it is nevertheless important to recognize that our subjective emotional reactions to these most elementary differentiations of form exist, that they are facts of consciousness, for upon this hidden foundation the arts of space must rest, just as the art of music rests upon our subjective responses to certain tones and combinations of tones.

Reference was made to the fact that Mr. Best-Maugard found on analysis that all of his seven forms were derivations from a single form, the logarithmic spiral. Now the generic, or archetypal form of everything in the universe is naturally not other than the form of the universe itself. Our stellar universe is now thought by astronomers to be a spiral nebula, and the spiral nebulae we see in the heavens, stellar systems like our own. The geometrical equivalent of the nebula form is a logarithmic spiral. This is therefore the unit form of the universe, the form of all forms. Books



BIRDS, FOWLS

FIG. 7



MODERN OBJECTS

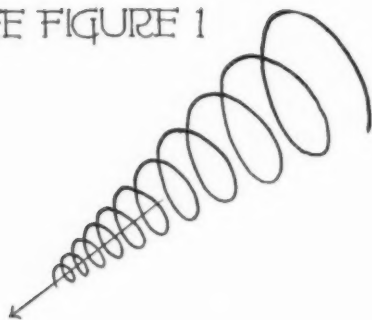
FIG. 8

have been written on the ubiquitousness of this spiral in nature, and its expression of a law of natural growth; the important part it plays in the arts of design has also often been noted, and it is the egg, so to speak, out of which all of Jay Hambidge's *Dynamic Symmetry* was hatched. Therefore it is not with a shock of surprise but of recognition that we find this selfsame form at the root of Mr. Best-Maugard's method.

The derivation of the seven forms from this one form requires a little explaining, for it lacks obviousness. If the logarithmic spiral be conceived of, not as a flat image, but three dimensionally—let us say in the semblance of an old-fashioned bed-spring—and then projected on a plane from different points of view, these various plane projections, in whole or in part, will be found to include all of the seven forms, or if the spring



SEE FIGURE 1



THE LOGARITHMIC SPIRAL AS A THREE-DIMENSIONAL FIGURE WHOSE PLANE PROJECTIONS YIELD THE SEVEN MOTIFS

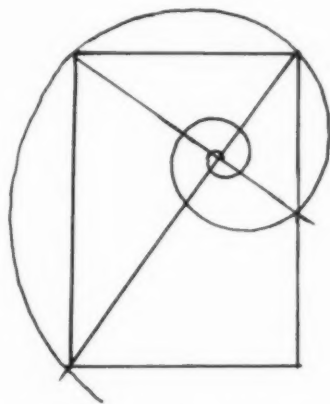
FIG. 9

be looked at in different ways and from different angles, a little imagination will discover them (Figure 9). For viewed directly from the end, we have the scroll; tilted a trifle from this position, a series of tangential circles; which, seen slantwise, become half-circles; the view from the side yields the wavy line, and this, foreshortened, becomes the zig-zag; the S-shape is merely a segment of the wavy line, while the axis of the whole figure is a straight line, or, if one prefers, the straight line is a "stretched out" segment of the spiral.

A connection between Dynamic Symmetry and the logarithmic spiral has been mentioned, and this requires a word of explanation too. For the benefit of those who are unfamiliar with this subject, it may be said that Dynamic Symmetry is the name attaching to a system discovered and developed by the late Jay Hambidge for establishing harmonious proportions and determining the disposition of focal points or centers of interest in any work of art in which the element of space enters.\*

\* See "A Dissertation on Dynamic Symmetry," by Claude Bragdon. The Architectural Record, October, 1924.

Let us imagine that an artist has a surface on which he proposes to draw a picture or create a design. Now every such surface must have a limit or boundary—this field must have its frame, represented by a height and a width. The parallelogram may be broad or narrow, vertical or horizontal, to answer to his special need, but nevertheless there is a certain latitude of selection as regards the exact ratio between its height and its width. It has been found that if this relation is susceptible of being expressed mathematically in terms of *commensurate units*, the eye—or the mind through the eye—experiences a certain satisfaction. The same thing happens in music, where the consonant intervals within the octave are expressed by ratios of small quantity, an odd and an even, 1:2, 2:3, and so forth. Now Mr. Hambidge, in the course of his researches, discovered that what he calls "root" rectangles, in which the *squares* on the sides rather than the sides themselves were commensurate, gave the greatest degree of satisfaction, probably by reason of their interesting mathematical properties, for in such rectangles, in addition to their squares being commen-



THE LOGARITHMIC SPIRAL IN ITS RELATION TO DYNAMIC SYMMETRY

FIG. 10



surate, their long sides are divided into equal parts by the perpendiculars to their diagonals, and the lines drawn parallel to the sides through the intersections of the perpendiculars and diagonals subdivide the area into similar shapes to the whole.

Therefore our artist, availing himself of this initial advantage, defines his space in terms of some root rectangle. These are expressed mathematically by the ratio  $1:\sqrt{2}$ ,  $1:\sqrt{3}$ ,  $1:\sqrt{4}$ , and so on. In the first case the square constructed on the end is exactly one half, in area, of the square constructed on the side; in the second, one third, in the third, one fourth, and so on. Having established a height and a width sustaining one of these relations he draws the diagonal, and from one of the interior angles, the perpendicular to the diagonal. By so doing he finds that he has defined or plotted, in terms of straight lines, a logarithmic spiral of which the diagonal and the perpendicular to the diagonal constitute radii vectors, and their intersection the "eye" (Figure 10).

Mr. Hambidge's system and Mr. Best-Maugard's method belong to different categories and have different aims, and yet, in one sense they are related, and mutually supplement one another, for the first is a system whereby the elements of a design may be bounded, disposed and grouped in an organic way, by reason of conformity to certain mathematical laws governing life and growth in the natural world, and the second is a method of self-expression which teaches how to create and develop those elements according to evolutionary laws which again are nature's own. The two schemes, involving the element of design, may be said to be masculine and feminine with relation to one another, using these much abused words in their universal sense, and not their personal or sexual. Dynamic Symmetry is masculine because it corresponds to "name," that which is remote from life in all its concreteness, is abstract and archetypal. Mr. Best-Maugard's method is feminine because it corresponds to "form," manifold and multitudinous, immersed in life, and

not withdrawn, as it were. The first provides the "frame" or invisible mathematical network of relations, the warp of the tapestry; the second provides the "field," or woof—whatever rich embroidery of forms the artist's feeling and imagination may determine. If this is obscure to the reader, let him conceive of the frame of a human life as its time-cycle—an invisible mathematical pattern of days, months, seasons, years; and the persons, things and events which fill this frame as the field, the character made concrete and visible.

I have written this essay from the standpoint of an artist, but I should gravely misrepresent Mr. Best-Maugard's intention if I let the reader suppose that his major aim was the creation of a new art or the development of artists. His major aim is to open to everyone who chooses to use it, a door for self-expression more or less guarded, bolted, barred. To quote from the publisher's announcement in substantiation of this, "The method is primarily for those who love drawing and design, but have abandoned their hopes of individual creation because of the difficult years of study ordinarily required." The author himself is at great pains to lay stress upon the humanistic, rather than the aesthetic aspects of the entire subject, for he says, "Self-development is the attainment of the characteristics of the superior man, endowed with faculties of deeper comprehension. There is unconscious human necessity, an instinctive, emotional or intuitive tendency to act within the harmony of the universe, known as the desire for beauty, perfection, rhythm, and so on; and so human evolution reaches out toward the comprehension of such laws. What we call beauty and perfection is a deepened perception of the action of those laws. . . . All the arts are ways of experimenting to find the key to universal law. Art is therefore not an end but a means, the means to self-perfection."

Like Ouspensky and others, our author holds that "the fourth form of consciousness" on the threshold of which evolving humanity now stands, can be

attained only through the development of the intuition, just as the third form, by which it transcended brute creation, was attained by the development of the reason. Here is his closing paragraph:

"Summing up we may say that the development of the intuitive faculty to its utmost degree will make each being able to interpret and afterward to unify his dual nature. He will then know the part in the evolutionary plan which he must perform and which corresponds to his achievement, being in its essence to help the unfoldment of all life. Art is

one of the ways to fulfill such aspiration, for those who have a preference for that way. He will approach the goal, using of the strength of his will power, discriminating wisely and acting under the law of order, selecting, destroying and building anew, each time that he knows or conceives something better. With this continued effort we shall unfold until we attain the unified action of our duality and reach consciousness, the perfect self-consciousness through intuition. And so, we shall achieve the goal of all life, Metamorphosis and the Superman."



# The MISSOURI STATE CAPITOL

TRACY & SWARTWOUT, ARCHITECTS



By  
*Egerton Swartwout*

ABOUT FIFTEEN YEARS ago the old Capitol building was struck by lightning and completely destroyed by the resulting fire. As this unusual occurrence took place on a mid-winter night it was regarded in many quarters as a direct manifestation of divine wrath, some even expressing the opinion that the outcome might have been more satisfactory if the Good Lord had waited until the legislature was in session. However that may be, the old Capitol was gone, and something had to be done about it. So Governor Hadley appointed a Commission, a bi-partisan one, and this Commission, a really fine body of prominent Missourians, made a careful inspection of all the Capitols in all the states; this may be slightly exaggerated, but they saw most of them, any way, and I know they did get a most valuable lot of information as to size, arrangement, and what was good and what was not, particularly the latter.

And then they had to settle the question of site, or perhaps they didn't; it may have been settled for them; anyway, it had to be in Jeffersonton, or to speak according to the State Manual, the City of Jefferson, County of Cole, State of

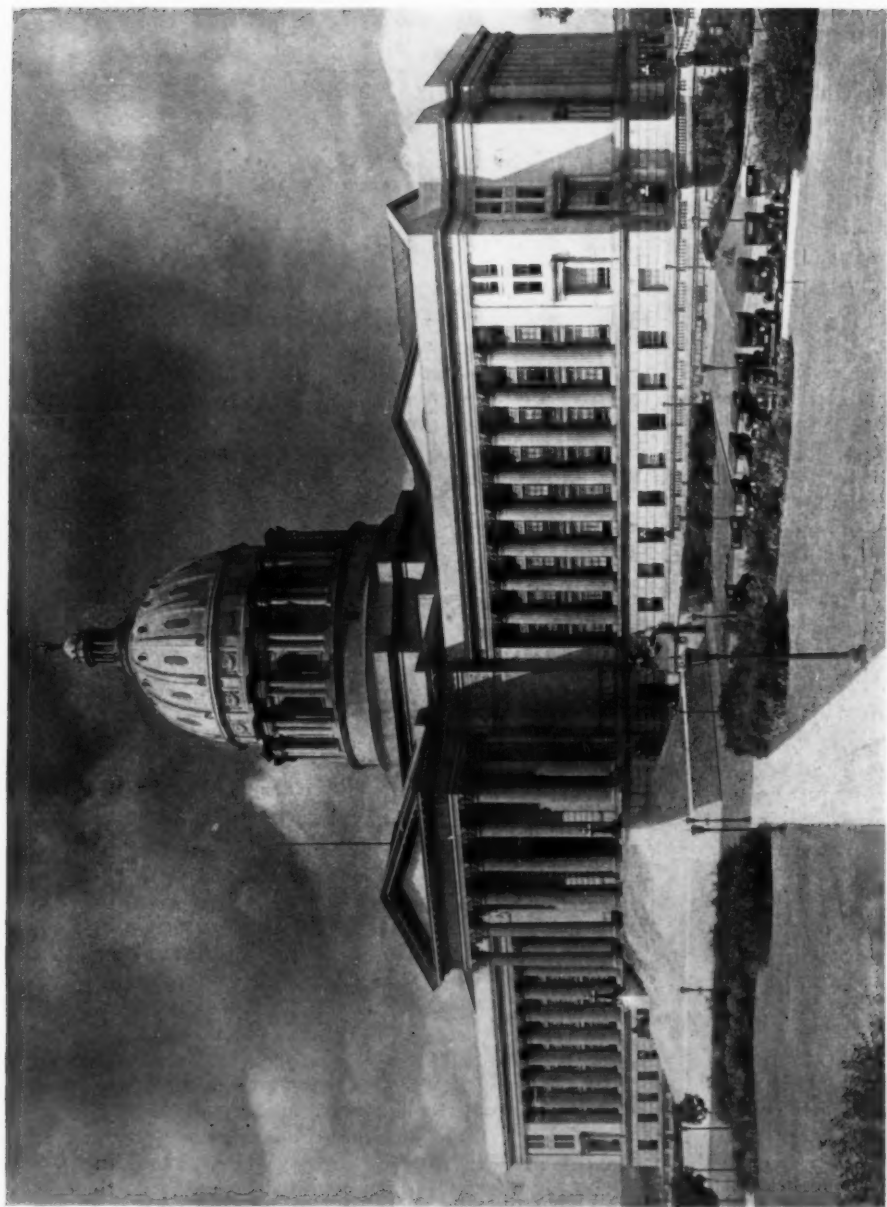
Missouri, and in the vernacular, Jeffcity. Just why it was not in St. Louis or Kansas City, I don't know; apparently no one does. I vaguely remember some one telling me way back in '38—I don't mean that any one actually told me anything in '38, but when they did tell me,

whenever it was, they said, as I remember it, that when they decided to build a new Capitol 'way back in '38, the people in St. Louis wanted it in Kansas City and the Kansas City people preferred St. Louis, and so they compromised on a vacant spot on the Missouri river midway between them. The Osage Indians apparently felt somewhat bitter about it, but were pacified with



Telephoto View of Capitol from  
the River Bank

a few beads and considerable firewater, and the promise of the future erection by the Federal Government of a large high walled building to house distinguished people at the nation's expense, which promise was religiously, or irreligiously kept, and they put this great building, called, I believe, "the Pen," directly on the axis of the Capitol as a deterrent. Some say, too, that Jefferson City is in the exact geographical center of the State, but this is indignantly refuted by the inhabitants

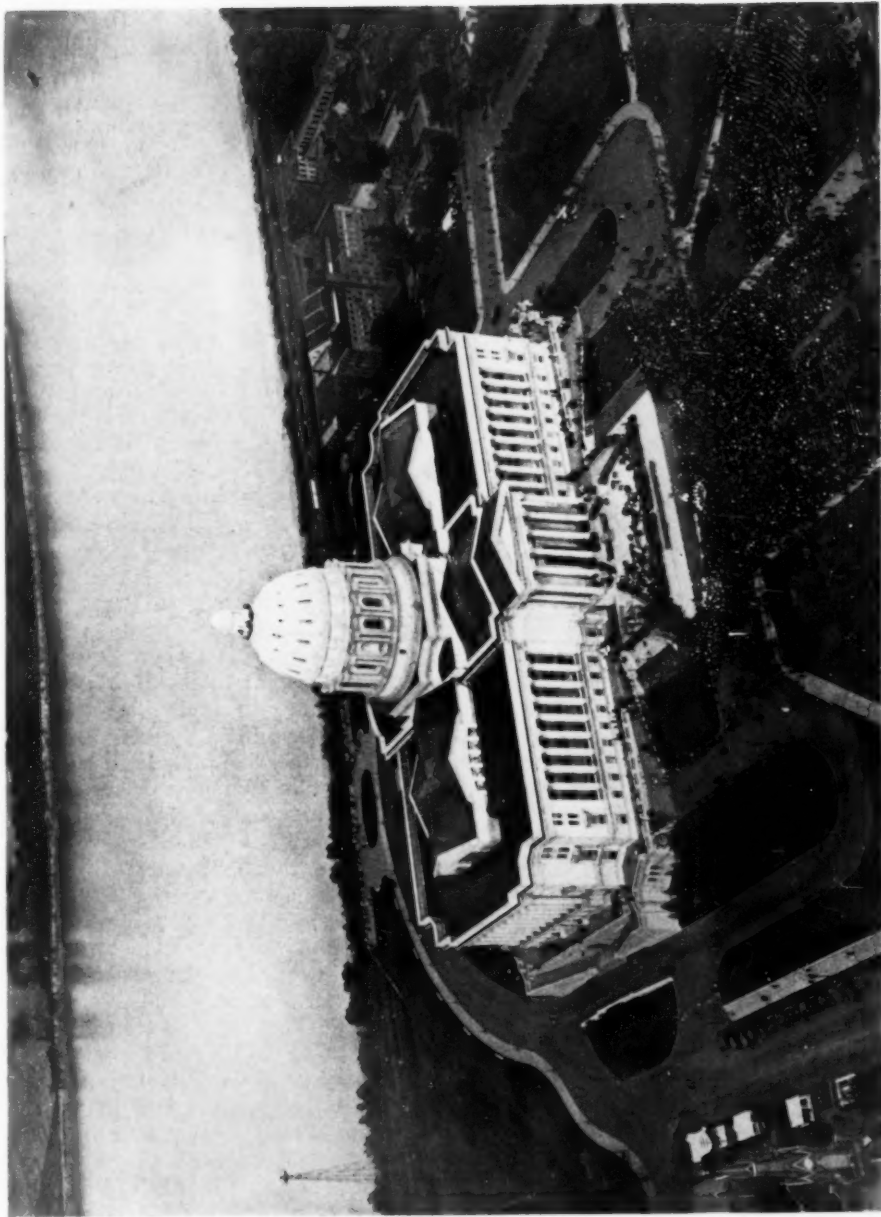


*The Architectural Record*

View from the Southeast  
 THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
 Tracy & Swartzent, Architects

*February, 1927*

*Courtesy of the St. Louis Post-Dispatch*



*The Architectural Record*

AIRPLANE VIEW OF THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO., TAKEN DURING THE DEDICATION CEREMONY, 1924

Tracy & Swartwout, Architects

*Courtesy of the St. Louis Post-Dispatch*

February, 1927

of Centralia, who claim that Centralia is the center of Missouri and that Missouri is the center of the United States, and that the United States—well, you know how they talk in Centralia. Anyhow, having explained just why the Capitol is where it is, there isn't much more to say about the site except that it is a very good site and very convenient, for the inhabitants of Jefferson City.

The old Capitol, that is the building of '38, was a very good building, to judge from photographs and from what I saw of the ruins. It was about the size of the New York City Hall, I should think, with two slightly projecting wings and a central portico and low dome; the portico was circular in plan, one half the circle formed by a colonnade and the other half a great niche; the order was Ionic, some thirty feet in height and very restrained and well done, and the exterior of local Missouri limestone. I regret to say I have forgotten the name of the designer, but he was also the architect for the old buildings of the University of Missouri at Columbia, which, too, are extremely good examples of the early work in the 19th century. There was a very melancholy addition to the building some time in the 80's, just about what you would expect in the 80's, and with a positive burst of genius they crowned the old portico with a queer sharply pointed dome in wood which for devilish ingenuity has seldom been equalled. But the ruins, what was left from the fire, were as picturesque as those of any old castle I've ever seen. All the interior walls of the old part were stone, very thick, and all the architectural features of the plan were formed in the stone, not furred out in plaster. There were niches and vaults and arches, all in rubble of a peculiar native stone called cotton rock, a hard brittle formation which is an outcrop in the vicinity, buff and pink and blue grey, and these old walls, blackened by the fire, touched by the last rays of the setting sun, when I first saw them, surrounded by beautiful elms, on a natural bluff a hundred feet or so above the river, formed a picture

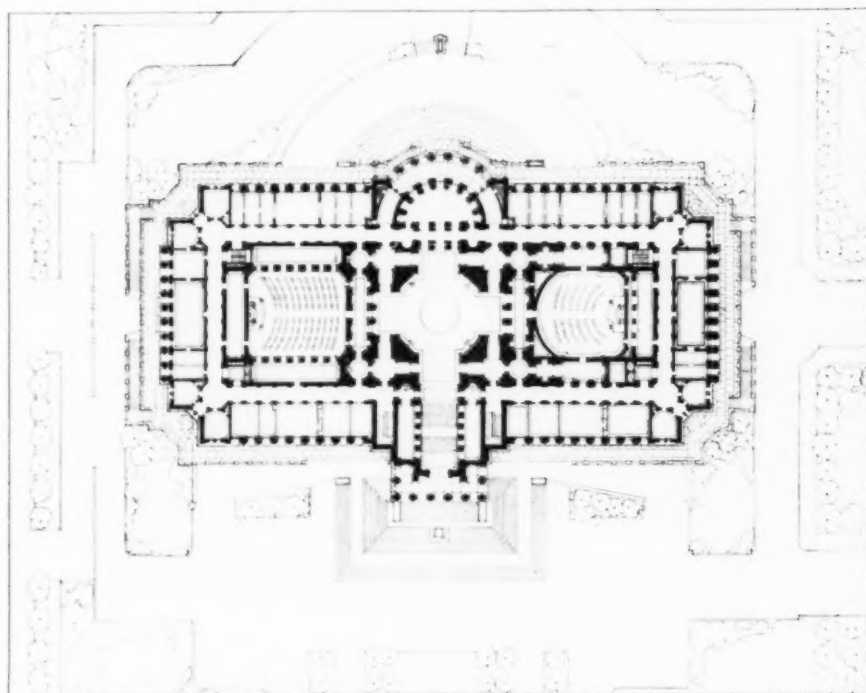
worth seeing. Even the deplorable work of the 80's took on a certain dignity. I think most of our buildings look better when they're burnt up; I remember a recent fire on Fifth Avenue—but that's far from Jeffcity.

The old Capitol for some reason stood end on to the river, perhaps to give a better view to the Pen, and there were on the site several old brick buildings which probably served some purpose or other, and there was, when I saw it first, a temporary Capitol of wood and stucco, and between and around these buildings were a great number of magnificent elms, there being quite a grove of them down in one corner by the river. And the sad thing about it was we had to cut them all down. We couldn't demolish the old buildings until the new Capitol was built, and as it was determined to put the new building parallel to the river the trees had to go. It was a great pity, and that's the reason the surroundings look so bare at the present time. I always thought, and I think most of the Commission thought, it would have been much better to have sold the old site and built on one of the hills outside the town, for the country in that part of Missouri is very beautiful, quite nilly, well wooded and very fertile. And there is an objection to the site other than the loss of the trees, and that is the grade of it. The principal street of the town, High Street, is on the top of a ridge which slopes quite abruptly to the bluffs, probably with a drop of about 30 feet. And this ridge also drops to the west so that High Street in front of the Capitol forms quite a steep hill, and the Capitol grounds naturally follow this slope, so that the street at the west, on the axis of the Capitol, is some 30 or 40 feet lower than High Street at the east corner. We had, therefore, to raise the Capitol on an artificial terrace and there were some queer things done in the grading of the walks—but that's enough about the plot, except that I might mention the bluffs, a glacial formation about 100 feet above the river, and the fine view up and down and across the Missouri.





Front Elevation Before Treatment of Grounds Was Begun



Floor Plan

THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.

Tracy & Swartwout, Architects



*The Architectural Record*

*February, 1927*

Elevation Towards the River  
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
Tracy & Swartwout, Architects

*Photo. Sigurd Fischer*



*The Architectural Record*

*February, 1927*

Northeast Corner  
 THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO  
 Tracy & Swartwout, Architects

*Photo, Sigurd Fischer*



*The Architectural Record*

*February, 1927*

East Elevation  
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
Tracy & Swartwout, Architects

*Photo, Sigurd Fischer*



*The Architectural Record*

February, 1927

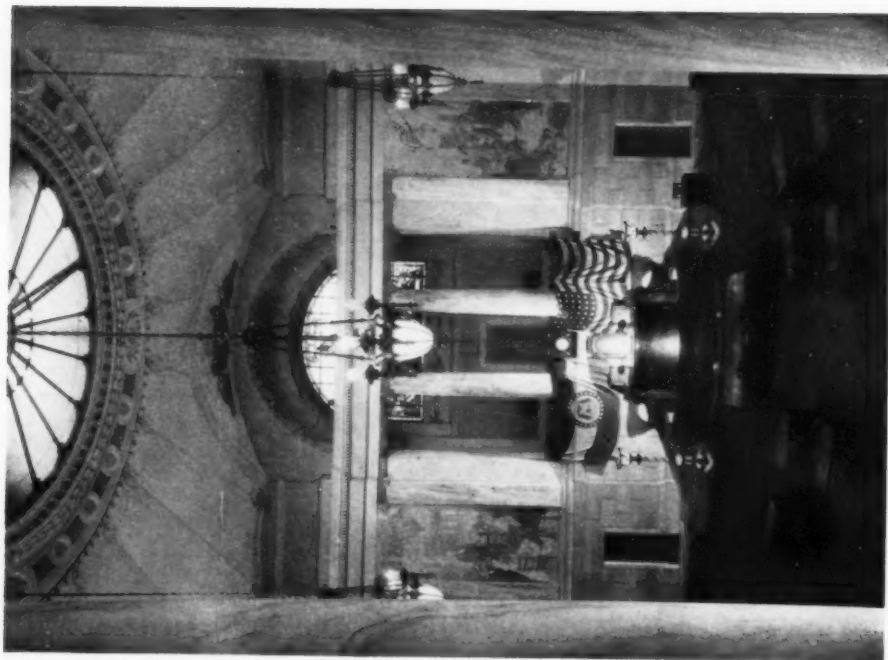
Main Portico  
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
Tracy & Swartwout, Architects

*Photo: Sigurd Fischer*



*The Architectural Record*  
House of Representatives

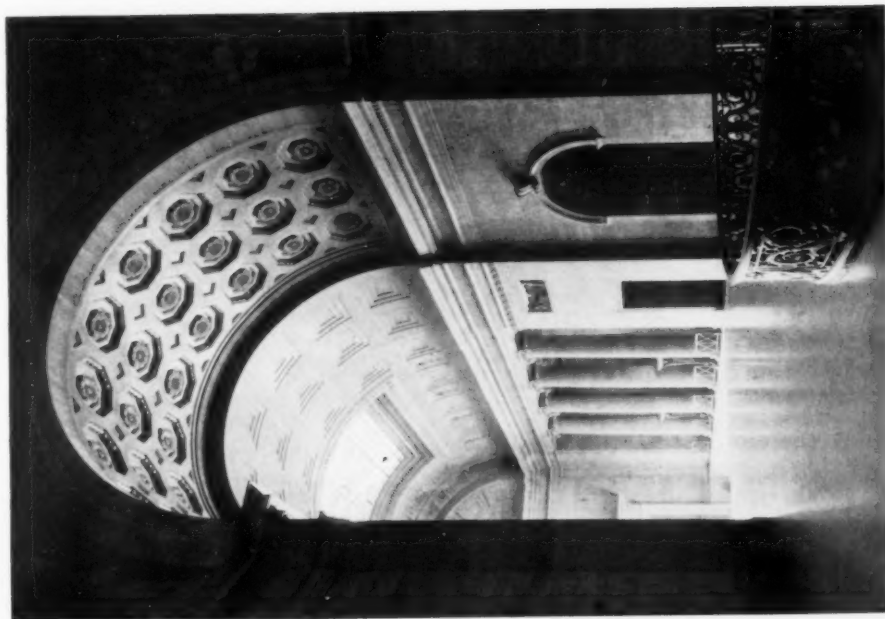
*Photo. Sigurd Fischer*



*February, 1927*

*The Senate Chamber*  
*(Mural Paintings by Richard E. Miller)*  
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
Tracy & Swartwout, Architects



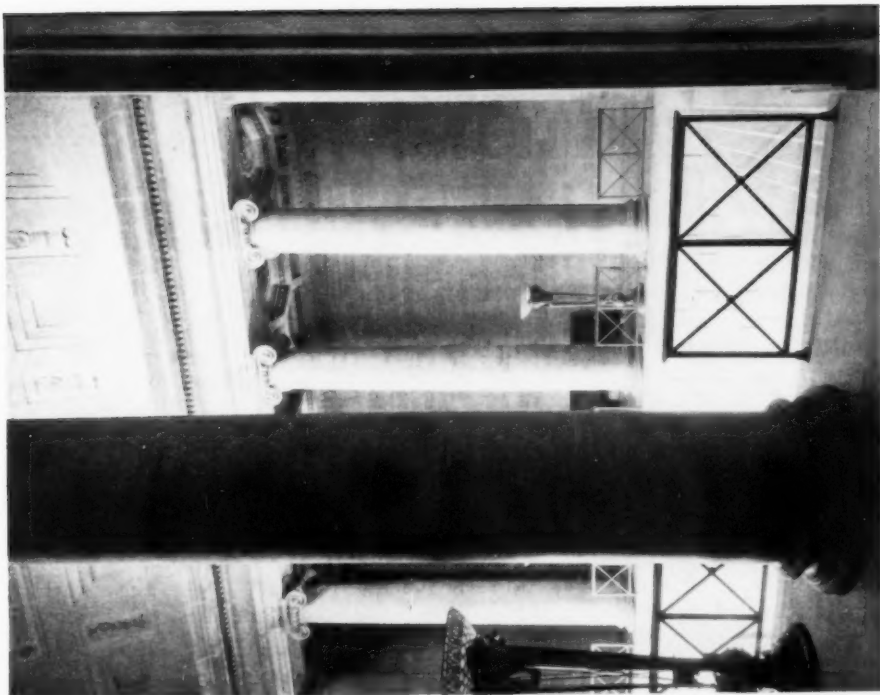


*The Architectural Record*

View of Grand Staircase From Rotunda

THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.

Photo. Sigurd Fischer



February, 1927

Portion of Grand Staircase

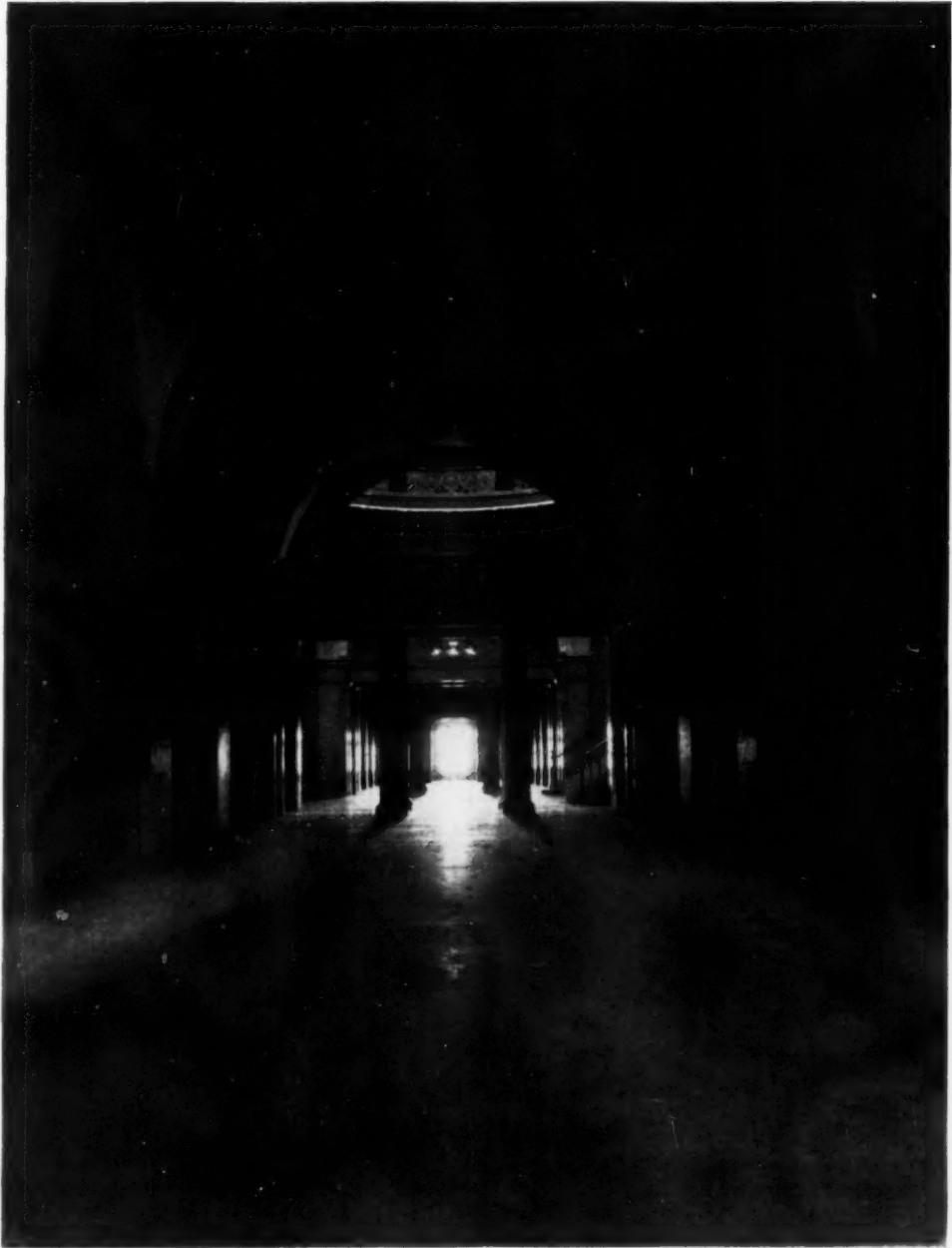
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.

Tracy & Swartwout, Architects

And now having taken up a thousand or so words describing the site, I approach the interesting part, interesting to me at least, the selection of the architect. As I remember, authority to build the Capitol was given by an act of the people by special election, and in it the Commission was authorized to secure the services of an architect by competition or otherwise. There were, I believe, the usual number of vehement otherwise protagonists, but also, as usual, each powerful otherwise protagonist wanted an otherwise different architect. The Commission were between the devil and the deep sea, and so naturally they turned to the less compromising system of selection by competition. It was to be originally, I believe, state wide only, then world wide, and then finally nation wide; anyway, it was wide—as I remember they had about a hundred schemes in the preliminary competition. The Commission had a rather tough time of it. No sooner had they gotten rid of the otherwise element than they were confronted by the stern features of the competition code of the American Institute of Architects. Before this time I question whether any of the Commission had ever heard of the American Institute of Architects. In their simple Missouri way they thought that, being appointed with full power by the Governor, they had full power and could hold their competition as they thought best. As some one expressed it, probably quite wrongly, these things get so mixed, there was a hope that some unknown budding genius, some inspired ploughboy, might be found, preferably in Missouri, that would come through with some wonderful design that would make the state famous. But they reckoned without their host, or rather, without the Institute. I think Walter Cook was President then, I'm not sure, it may have been I. K. Pond; but whoever it was, a hurry call was sent out to the shock troops, headed, I believe, by Frank Miles Day, or Medary, or some other militant person from the city of Brotherly Love. They explained the Code and the Canons of Ethics and the Octagon

and the Annuary, and showed conclusively by diagrams and graphs what would happen to the finances of the state and to the commission's own reputation if the inspired ploughboy came through. I got that story from Medary; I don't vouch for it myself, and the Commission say it never happened, but it's a good story, so I put it in. Anyway, the Commission capitulated; who could withstand the arguments of Frank Miles Day, Medary, Clip Sturgis and I. K. Pond? The deep and lasting impression they made was evidenced some months later when the preliminary judgments were on, and the jury and the Commission were going down High Street to the New Madison for some light refreshment; there was an appalling noise behind them and a pair of Missouri mules hitched to a farm wagon came careering down the street. Quickly one of the judges, smiling, yet stern, stepped out in the road and shook one finger playfully but reprovably. The mules stopped as if they had run into a fence. "A courageous deed, Mr. Magonigle! Wonderful!" said one of the Commission. "Well," said the chairman, "Those mules just knew he was a member of the American Institute of Architects and they had to stop."

But to get back to the competition—out of some hundred schemes, ten were selected to go in the finals, and the ten were notified that before beginning the final drawings one representative from each firm had to visit Jefferson City, see the site, and appear before the Committee. I went out with Laurence Peck, who was, in that competition, associated with Walter Cook. It was hot; and when Jefferson City decides to be hot it does it in a whole-hearted manner unknown elsewhere. It was—well—very hot, and after a most uncomfortable night Peck and I went up to the Commission meeting, each with the hope that we'd lose the competition and never have to come out there again. As we sat in the small, stuffy room, eating apples presented to the Commission through the courtesy of the clerk, Mr. J. Kelly Pool—yes, that's his real name—a tall, immaculately



*Photo, Paul Weber*

Historical Museum  
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
Tracy & Swartwout, Architects

dressed man came in, and, as Col. Stephens said to me long afterward, "Do you remember, Swartwout, that hot day when you first came out here with a young man from New York, and you all seemed simple sort of people for New Yorkers, and Mr. Link of St. Louis was there; we knew Link well, and we all sat around in our shirt sleeves and ate apples and had a real pleasant time, and then Mr. — came in and we all got up and put on our coats!" I do remember that very well, and I also remember many other pleasant meetings with the Commission. Everybody in Missouri knew Col. Stephens and knows him yet, thank God, and loves him and respects him too, and the Hon. A. A. Speer, one time speaker of the House and now the president of the biggest bank in that part of the country; the Hon. J. C. A. Hiller from a farm down south of St. Louis, but with long experience in the service of the state, and good old Major Lacaff from Nevada, with a fund of humor and a wealth of stories. A really fine lot of men and a good Commission.

The contract for the construction of the complete building was let in the fall of 1913 to the John Gill and Sons Company of Cleveland, and the building was occupied about four years later; and barring a somewhat severe controversy between Kerm Gill and the Commission on the subject of the stone to be used, there was no particular incident in the building of it. The stone that was used came from Carthage in the southwestern part of the state, and is a hard, handsome limestone, somewhat cut up with crowfoot seams but which weathers well. Not generally known at that time, it has been used a good deal lately. It carves well. There is a good deal of it in the interior, generally with a hone finish. It takes a good polish and is very like grey Knoxville. We also used a somewhat similar stone from Phenix, Missouri, which is now known as Napoleon Grey in the trade. The Rotunda walls and columns are of this material, cut across the bed and honed, and with an eighth inch white joint. The columns in the House are green granite, and the walls

there, and the walls and columns of the Senate, and the corridor walls, are all of Carthage and Phenix stone. In general the interiors are rather elaborate and the entire work of the best construction, and extremely well built, and yet it cost about 33 cents a cubic foot. Of course it was let when prices were at the lowest level in years, and of course there are a number of very large rooms, which tends to decrease the cubic foot price, but notwithstanding that, the state got a great bargain. I can't mention the quality of the work without giving credit to our local superintendent, Mr. E. M. Plump, and to Mr. Raphael Menconi, who did the modeling. It is not too much to say that without them the Capitol would not be the building that it is.

Our contract with the state did not include the furniture or the fixtures, although it was the intention of the Commission to make a supplemental contract with us for this work. But it happened that when the building was nearly finished some enterprising gentleman of the otherwise persuasion discovered that there was a flaw in the act, or a fly in the ointment, or something of that sort, and the Superior Court handed down a decision that the appropriations for fixtures and furniture must be remade by the legislature, and there was an immediate scramble of the otherwise element to get in on it. When the shouting and the tumult died, the otherwise element died, too, and, alas, so did we. The Commission were prevented from employing any professional assistance whatever in the purchase of some three hundred thousand dollars worth of furnishings. It was a difficult job to do, but the Commission rose nobly to it, and there was never the breath of scandal connected with any of their work. I'm not enthusiastic over some of the fixtures, particularly those in the check blocks of the main portico, but then there are things in the building itself I would like to see differently done.

The decoration, the sculpture and the mural paintings were done under a separate Commission who took up that part of the work when the Building Commis-



Photo, Paul Weber

View of Lower Rotunda  
THE MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
Tracy & Swertwout, Architects

sion turned over the building to the state. This Commission, of very able and public spirited men, have, in a general way, consulted with this office, but theirs is the credit for the selection of the artists and sculptors and the subjects of the decoration. Adolph Weinman did the main pediment, a very remarkable piece of work, and he is also doing a fountain in the grounds. James E. Fraser has a large statue of Thomas Jefferson nearly completed for the portico steps and two heroic figures of Lewis and Clark in the rotunda; all of which are among the best of his work and that means the very best in modern times. Herman MacNeil has an excellent frieze on the river front and Stirling Calder a frieze on the south front, Robert Aitken has two heroic figures each side of the main pediment, and Sherry Fry did the figure on the dome. The murals are done by equally well known men, Frank

Brangwyn did the great paintings in the rotunda, Charles Hofbauer a large battle picture in the House and Richard Miller four murals in the Senate. Gari Melchers, Reuterdaahl, Wyeth, and many others did excellent work. The stained glass was done by Schladermundt and by Paris and Wiley. I regret that in this issue it was not found possible to include photographs of all these really good works of art, but I hope that they will be shown properly at a later time.

The plan of the Capitol was dictated by the competition program, which called for a building of the usual State Capitol type, that is to say, the legislative chambers face each other on each side of a central rotunda and are on what is really the third floor; the offices for state officials are on the two lower floors, and there is consequently a large unlighted central area under the Senate and House and Rotunda. This is the

conventional type; it is generally convenient and economical and we were obliged to follow it. We did suggest, before we made the working drawings, that the legislative portion might be separated from the executive offices, which might be put in separate buildings or in wings, and the legislative chambers and the rotunda put practically on the entrance level, so that the rotunda could be entered directly, and not up a long flight of steps. I think this would have been a better scheme, and the building being lower would have been in a scale more suited to the surroundings, but it was more expensive and the Commission did not feel at liberty to make such a vital change from the accepted competition drawings which had been approved by the state officials and widely published. The Commission felt too that we had succeeded in overcoming the difficulty of the unlighted space under the Senate and House, as we had utilized this space, not for storage, as is generally done, but by placing there the two large museums that were required, the Natural Resources and the Historical Museums, which could be lighted artificially and which, extending up through the two lower stories had sufficient height to be monumentally important; and the Commission was also pleased with the great

entrance stairway, the so-called State Stairs, which led directly from the portico to the rotunda. This is really quite a feature of the building, but one which unfortunately is difficult to photograph. When the great bronze door of the portico, about 20 feet high, is open, a good view of the entire rotunda can be had from the terrace level at the foot of the portico steps.

The dome is of stone and is, as I remember, about 300 feet high, and if any one is courageous and strong enough to climb up, there is a very wonderful view from the top of it. I went up once or twice but it was a complicated climb after leaving the elevator and there is a story that my partner, the late Col. Evarts Tracy, once tried to take a party of visitors up there before the building was finished, and got completely lost between the roofs, much to the edification of one of the visitors, a newspaperman, who published quite a story with the caption, "Architect Lost in His Own Building." Ev had much to do with everything that was done out there, and the Commission, as well as myself, greatly regretted that his untimely death in the service of his country prevented his being present at the dedication of a building he had followed through so carefully from its inception.



## SCULPTURE and MURAL PAINTING of THE MISSOURI STATE CAPITOL

*Charles H. Dorr*

MISSOURI WITH its wealth of agricultural products, its wheat fields, its mines and great water ways; rich in historic lore, in primitive Indian life and early pioneers, is a most alluring theme for the sculptor or mural painter to perpetuate in the embellishment of the monumental Capitol of the Mid-Western State.

The staff of painters and sculptors chosen by the Art Commission for the decorating of the State Capitol represent some of the most brilliant artists of our time. Their work of embellishment is not yet finished. Many items still remain to be installed, of which photographs are not yet available; hence the few prints reproduced here should not be considered as entirely representative of the work of the Allied Arts in the decoration of the Missouri State Capitol.

This work might be divided into two groups; one following closely the history of the State of Missouri and depicting stirring incidents interwoven with the life of the great mid-western state, the other

group treating the subject of the state's progress allegorically.

To the first group belongs the sculpture of A. Stirling Calder. It is in the form of a frieze on the south portico of the building commencing on the west side and extending 138 feet. This frieze with its rhythmic groupings ex-

pressed in bold masses of light and shade is divided by the architectural plan into thirteen panels of different widths, the largest panel occurring over the portico and under the central entrance to the Capitol. An incident in the life of the nation forms the subject of each group.

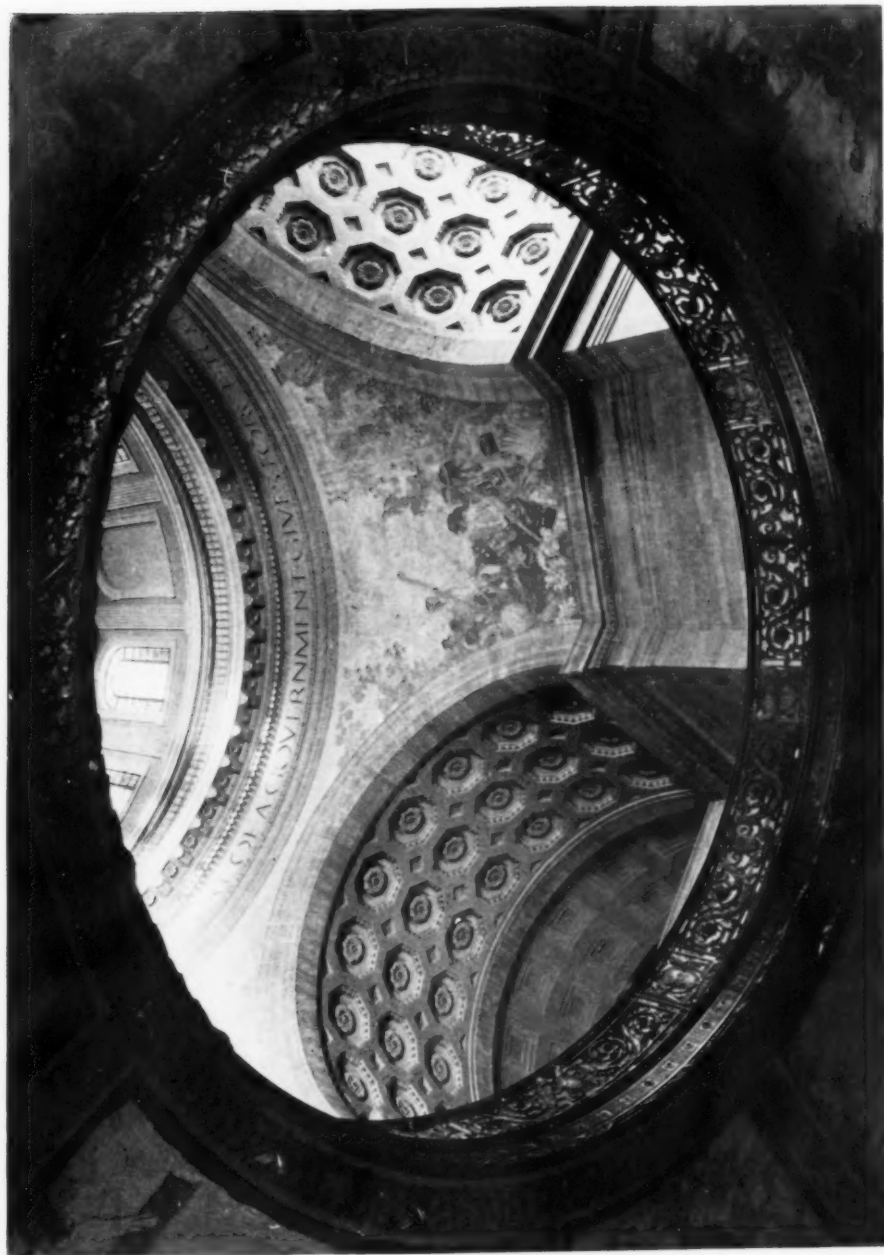
In contrast to the south frieze, the frieze on the north façade, the work of Herman A. MacNeil, conveys a message in allegorical form. Themes chosen by the sculptor range from "The Passing of Tradition" to the "Age of Electricity," and he has successfully developed in

a symbolical way the fundamental elements that have made America what she is and what she hopes to be.



FIGURE OF THOMAS JEFFERSON FOR THE  
PORTICO STEPS OF THE MISSOURI  
STATE CAPITOL

*James Earle Fraser, Sculptor*



February, 1927

Interior of Dome Taken From Rotunda  
 MISSOURI STATE CAPITOL, JEFFERSON CITY, MO.  
 Tracy & Swartwout, Architects  
 Mural Paintings by Frank Brangwyn

*The Architectural Record*

Photo, Sigurd Fischer



*The Architectural Record*

Pedestal Figure, East End of Portico  
Robert L. Aitken, Sculptor

Photo. Sigurd Fischer



*February, 1927*

Pedestal Figure, West Side of Portico  
Robert L. Aitken, Sculptor

Tracy & Swartwout, Architects



PEDIMENT, MAIN ENTRANCE  
Adolph A. Weinman, Sculptor

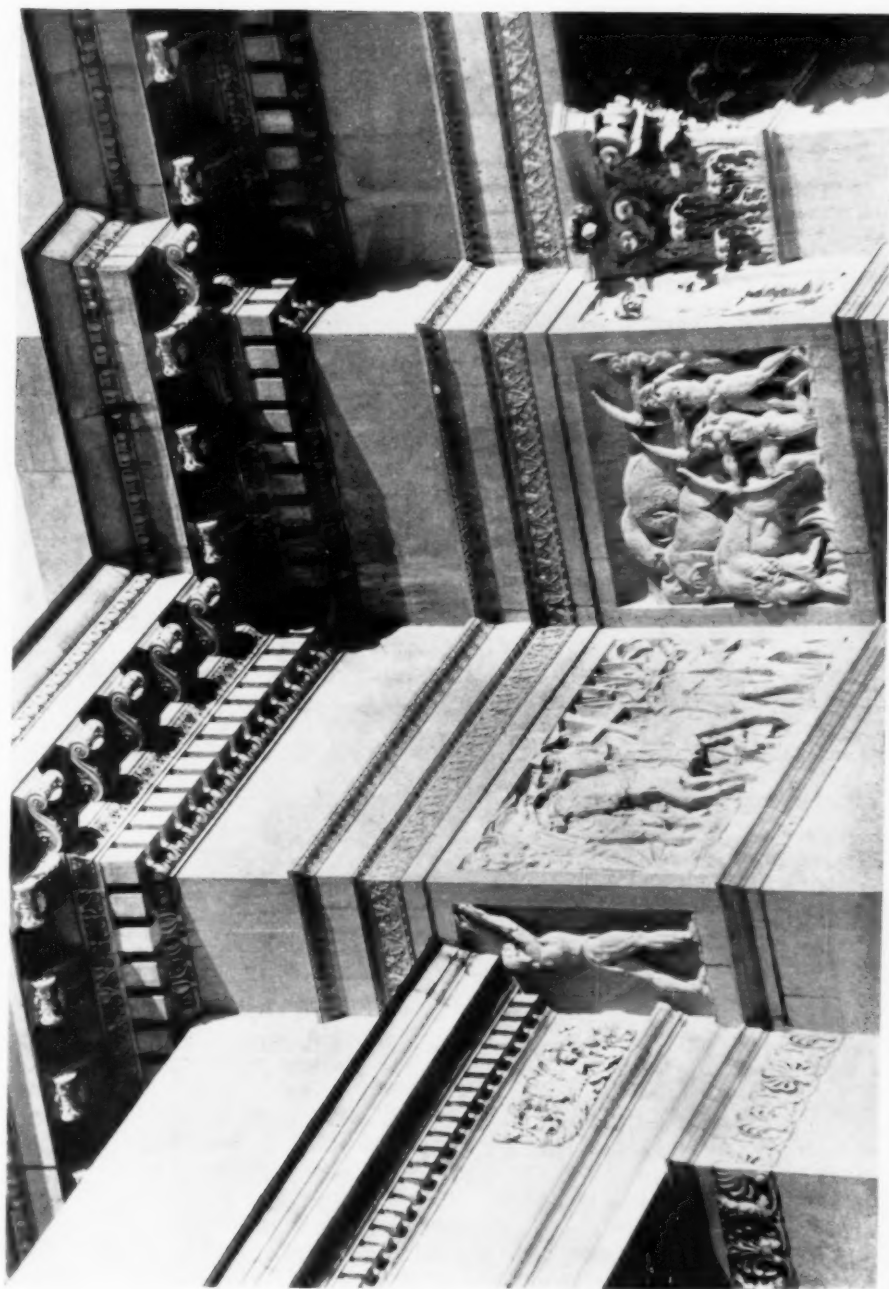


*The Architectural Record*  
PART OF FRIEZE, RIVER SIDE FAÇADE  
Herman A. MacNeil, Sculptor



*February, 1927*  
PART OF FRIEZE, RIVER SIDE FAÇADE  
Herman A. MacNeil, Sculptor

MISSOURI  
STATE  
CAPITOL  
JEFFERSON CITY  
MISSOURI



*The Architectural Record*

Photo, Sigurd Fischer

DETAIL AT WEST CORNER OF PEDIMENT, MISSOURI STATE CAPITOL,  
A. Stirling Calder, Sculptor  
Tracy & Swartwout, Architects

February, 1927



LUNETTE IN THE MISSOURI STATE CAPITOL.  
E. Irving Couse, Painter

The pediment above the main entrance to the Capitol is the work of Adolph A. Weinman. The "Spirit of Progress" forms the center group. To the right are shown "Agriculture," "Learning," "Art," and the "Genius of Light"; on the left are "Heracles Leading the Steeds of Industry," "Law," "Order," and the "Genius of Peace and Abundance."

Placed on each side of the main entrance is a heroic figure by Robert I. Aitken (See Page 123). Mississippi is typified in the male figure and Missouri in that of the companion female. The pedestals supporting these are decorated with symbolical figures in bas-relief.

James Earle Fraser has executed a full-length figure of Thomas Jefferson, a reproduction of which appears on Page 121, which will shortly be placed on the portico steps. The figures of Lewis and Clark in the Rotunda are also the work of Mr. Fraser.

Sherry Fry is the sculptor of the

bronze figure surmounting the dome of the Capitol.

Among the artists whose work is represented in the interior of the Capitol are Frank Brangwyn, who has contributed the paintings on the ceiling of the Rotunda (See Page 122); Richard E. Miller, perhaps best known in the art world for his charming figures painted invariably in light key, who has four murals in the Senate Chamber (See Page 114); Charles Hofbauer, painter of the large battle picture in the House of Representatives; E. Irving Couse, who has recorded the early life of the Indians and the early pioneers in three lunettes; Ernest L. Blumenschein, Gari Melchers, Henry Reuter Dahl, N. C. Wyeth, Oscar Berninghaus, Bert Phillips and C. H. Duntton. The work of designing the stained glass windows of the Capitol was entrusted to Herman T. Schladermundt, to Frederick J. Wiley and W. Franklyn Paris.



## REMODELLING or TRANSFORMATION

*By*  
*Harold Donaldson Eberlein*

THE SUBJECT of the three accompanying illustrations is a small farmhouse at the foot of Barren Hill near the head of the Wissahickon Valley, just outside of Philadelphia. The structure dates from the early years of the nineteenth century and belongs to that numerous class of contemporary dwellings to be found scattered throughout the rural districts of the Eastern and Middle States.

Some of these houses are built of stone, some of brick, some of them are coated with stucco and still others of frame construction are weather-boarded. They are by no means all alike in point of style. As a matter of fact, they exhibit wide diversities in this respect. In the materials of which they are constructed, in the way in which those materials are used, and in the sundry other character-

istics of outward aspect they customarily reflect the local peculiarities and building preference of the several regions in which they occur. They are all alike, however, in two particulars. First, they are all of modest size; second, they are all unpretentious, but of sound structure, comfortable, and possessed of a certain homely style so that they afford abundant possibilities for successful rehabilitation. This community of qualities justifies us

in putting them in a single category irrespective of individual style affinities.

Houses of this sort are increasingly in demand for country homes and, once they pass into the hands of new owners intending to refit them for their own occupancy, the question of the most satisfactory course of procedure arises.

Either the house may be dealt with in such a manner that it will essentially retain its original

character, although obviously refitted and rehabilitated or even, perhaps, extensively remodelled, or else it may be treated merely as a structural nucleus for sundry additions and a thoroughgoing transformation without any thought of preserving the former architectural type, a stock, in other words, on which to graft an exotic fruit. Thus, for example, a sturdy old stone farm-

house may be added to and metamorphosed into a French château or manor house, and that without any serious difficulty; or an old stone barn may equally well serve as a background from which to evolve an Italian villa or a Spanish hacienda.

When a determination has been reached to respect local tradition, of which an old farmhouse, according to the wont of its particular neighborhood,



South Front, Showing Additions at Right. Edmund G. Gilchrist, Architect.

HOUSE OF FREDERICK BALLARD, ESQ.  
Barren Hill, near Philadelphia



Entrance Detail  
HOUSE AT BARREN HILL, PA.

is a typical expression, it means that the architect will have to refrain from exploiting his personal tastes and fancies in the field of new creation but it does not involve such a surrender of individuality as one might at first be tempted to imagine.

And there is a good deal to be said in favor of preserving the pristine architectural character of these farmhouses. In the first place, the house whose character is so preserved always has that valuable quality "indigenosity," if one may be permitted to coin a term from the corresponding adjective. A house of exotic type, no matter how charming it may be nor how well it may fit into its particular environment, can never have quite the same air of assured self-possession and close kinship with the whole countryside round about as the house whose fabric is an outgrowth of local tradition, whose every feature, so to speak, has proceeded from the soil on which it stands.

Then, again, by long local usage, houses of a given type have demonstrated their

fitness for the general conditions of the environments in which they are customarily met with. They are a part of the vernacular and, as component elements in the traditional character of the countryside, they help to preserve the homogenous quality of their respective neighborhood.

Again, in the refitting or remodelling of an old farmhouse with attendant enlargements—enlargement is no obstacle to the retention of style—if the original vein of treatment is adhered to, more of the fabric will be usable as it stands and fewer drastic alterations will be necessary to fit the structure for its new requirements.

In dealing with the little farmhouse at the foot of Barren Hill, Mr. Gilchrist has taken his cue from the simple fashion of the dwelling as he found it. Enlargement was imperative, but the additions were made with a sympathetic understanding of the genius inherent in the old building and without disturbing the *quality* of its aspect. The wisdom of the course pursued is evident in the result.



South Front and Garden Walk  
HOUSE AT BARREN HILL, PA.

# P O R T F O L I O

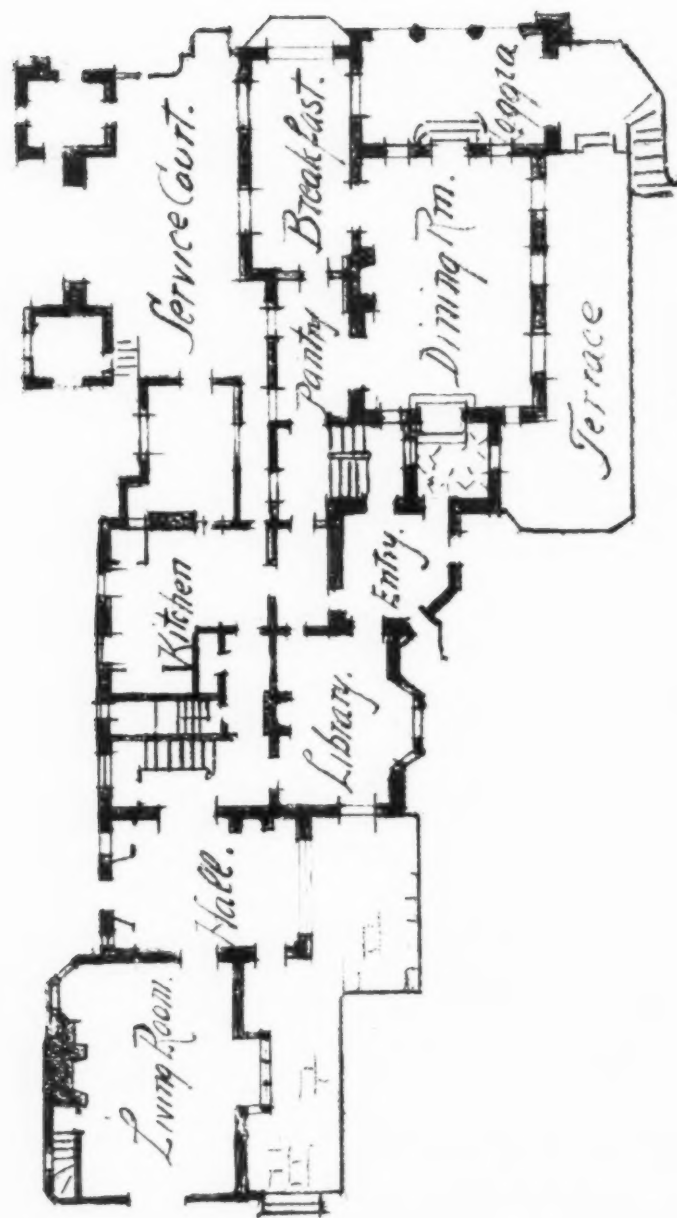
C V R R E N T · A R C H I T E C T V R E



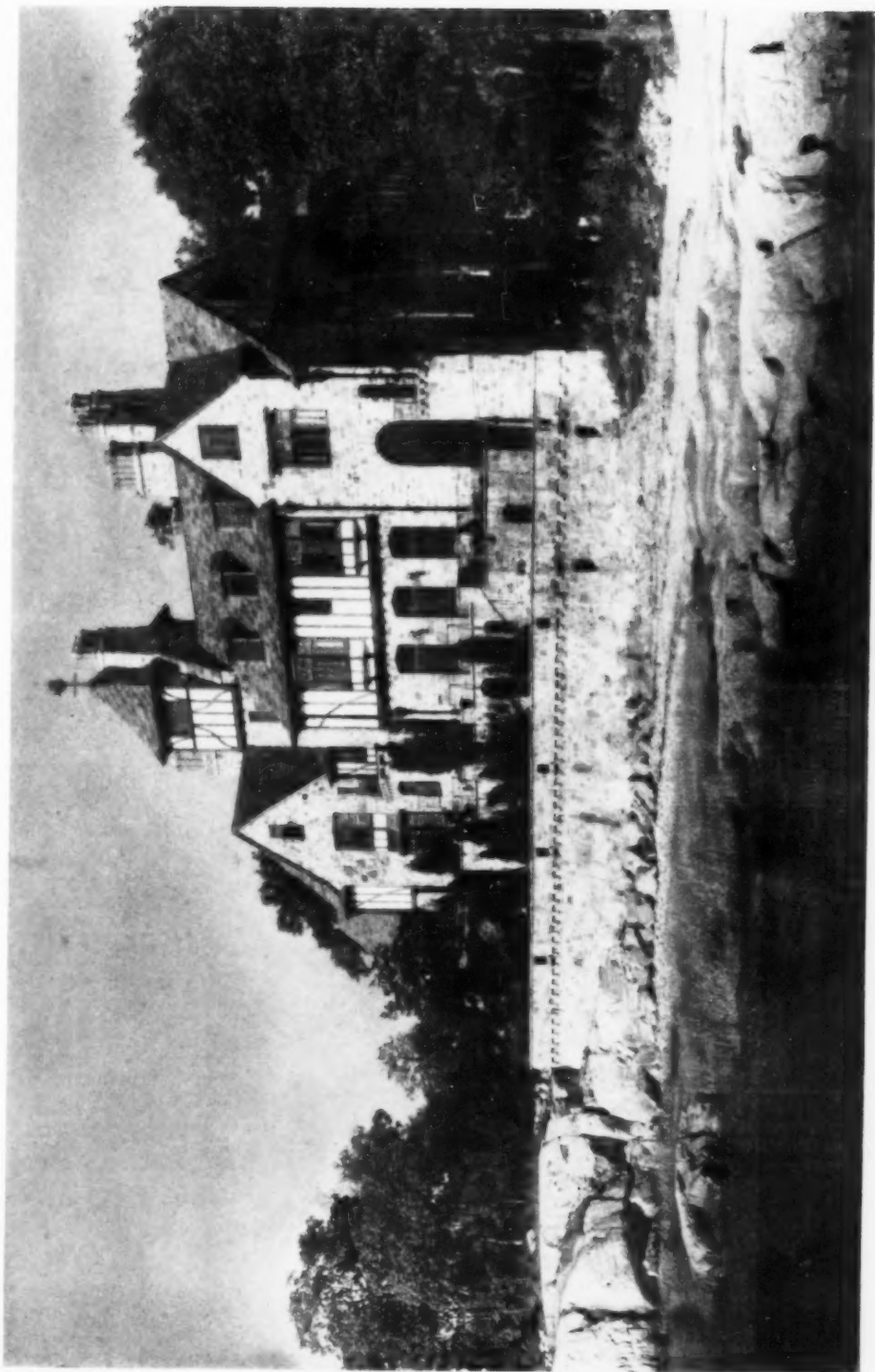
*Photo, Amemiya*

RESIDENCE OF GEORGE TOWNSEND, ESQ., GREENWICH, CONN.

Frank P. Whiting, Architect



RESIDENCE OF GEORGE TOWNSEND, ESQ., GREENWICH, CONN.  
 Frank P. Whiting, Architect

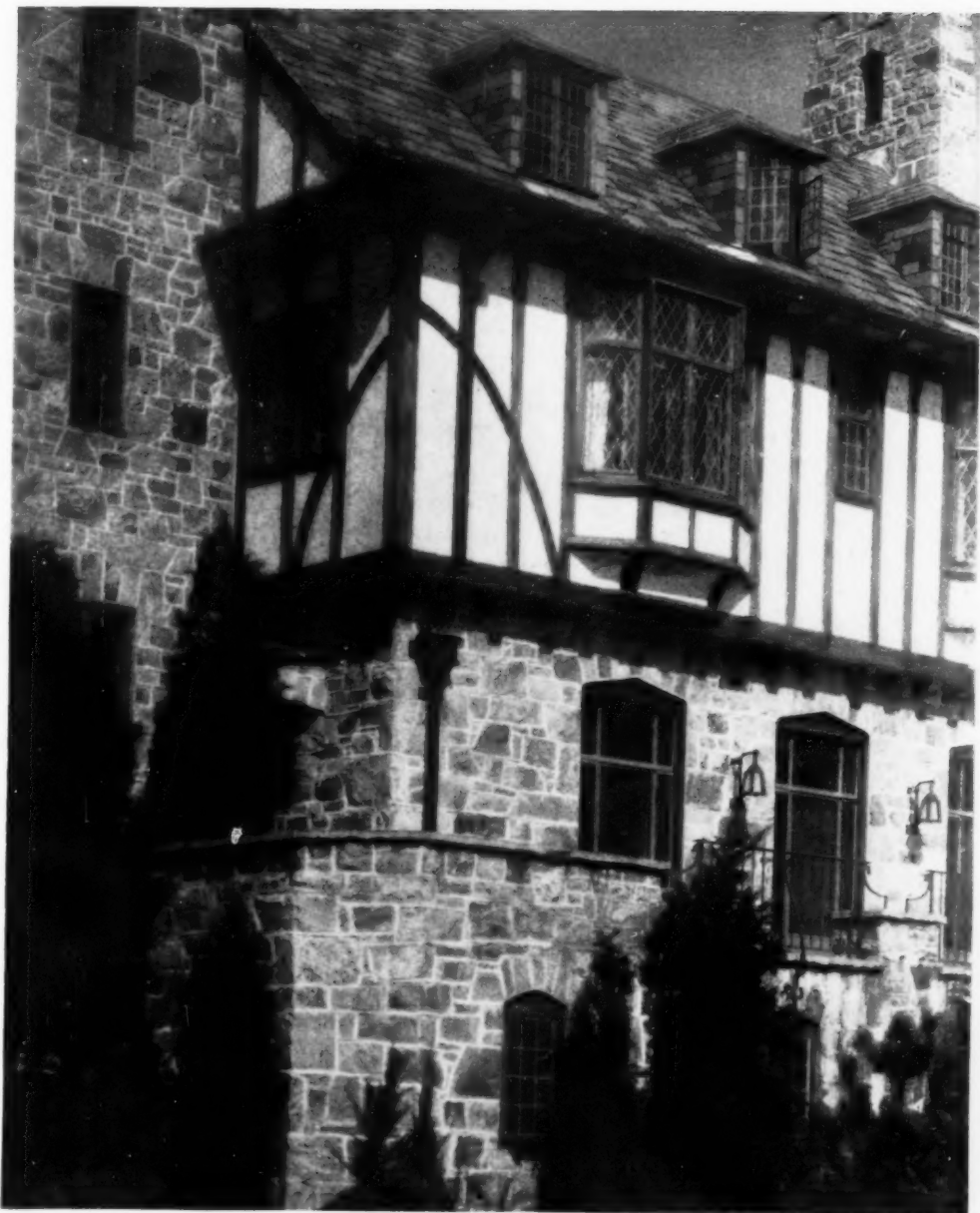


*Photo, Antoniya*

RESIDENCE OF GEORGE TOWNSEND, ESQ., GREENWICH, CONN.  
Frank P. Whiting, Architect







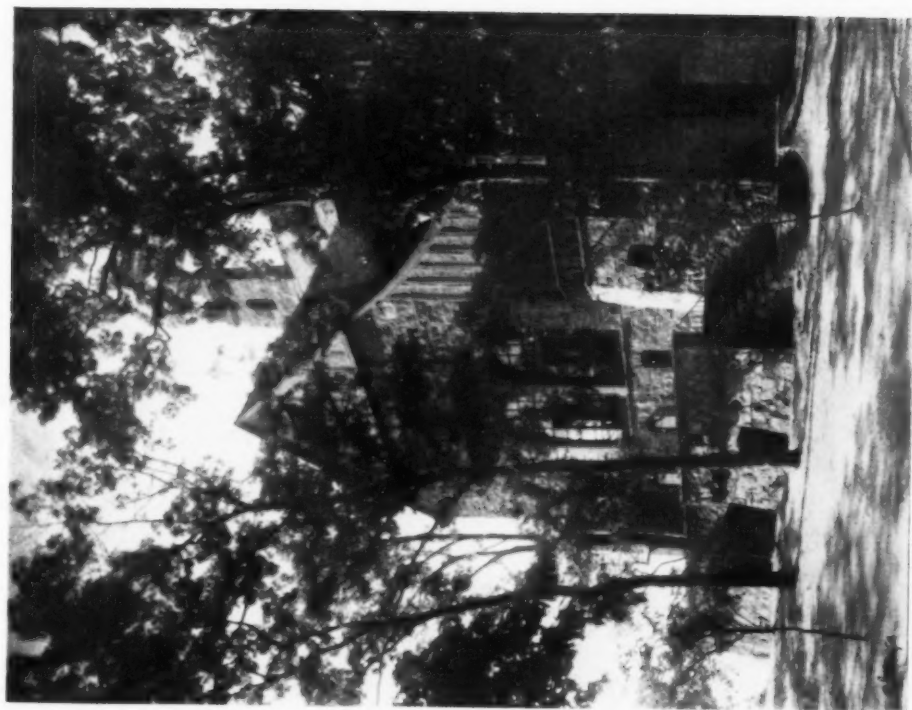
*Photo, Amemiya*

RESIDENCE OF GEORGE TOWNSEND, ESQ., GREENWICH, CONN.  
Frank P. Whiting, Architect



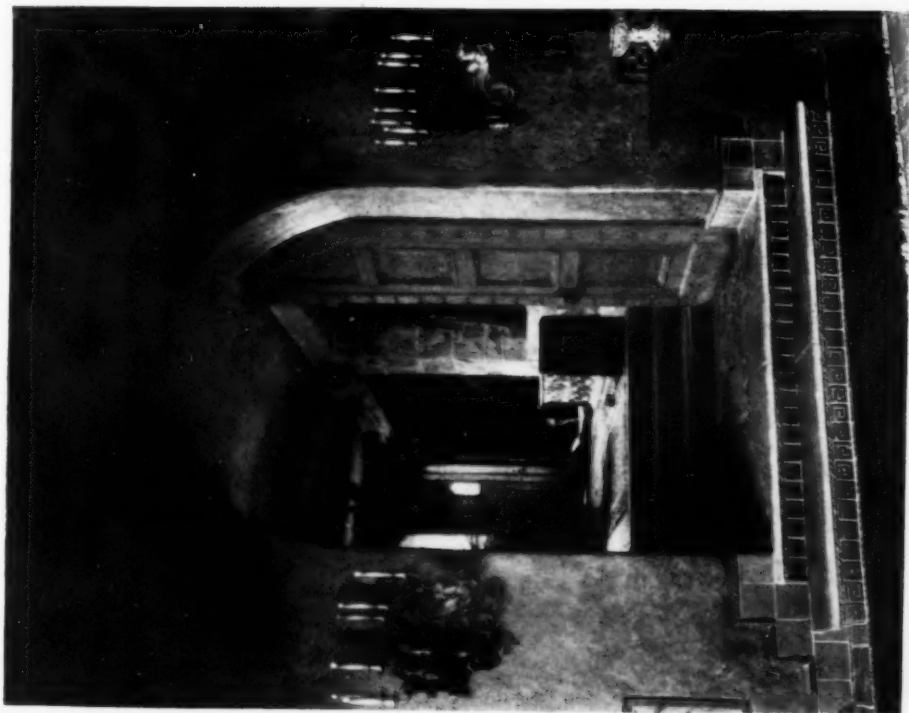


*Photo, Anemaya*

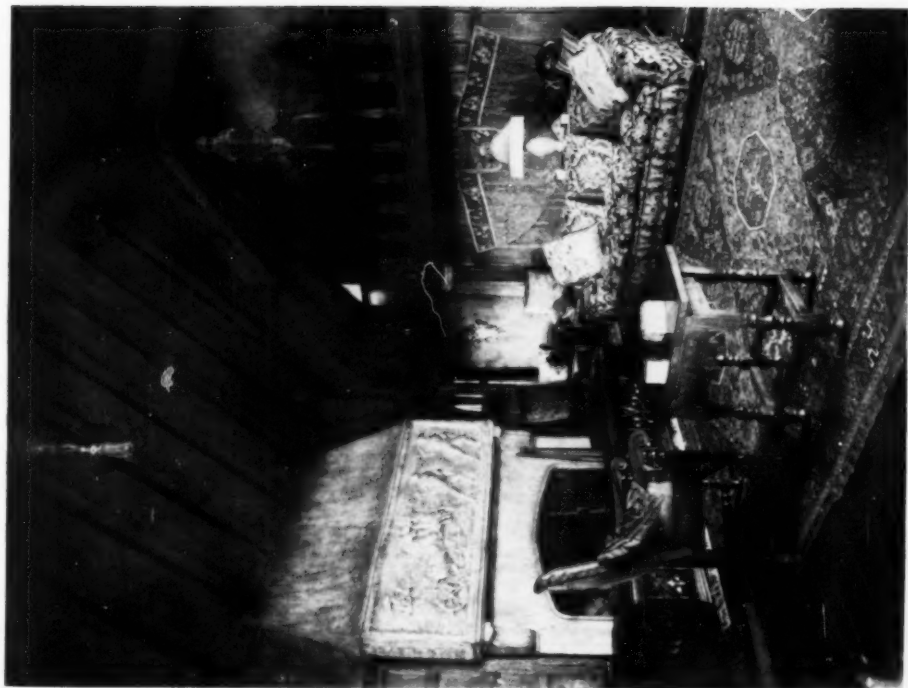


RESIDENCE OF GEORGE TOWNSEND, ESQ., GREENWICH, CONN.  
Frank P. Whiting, Architect





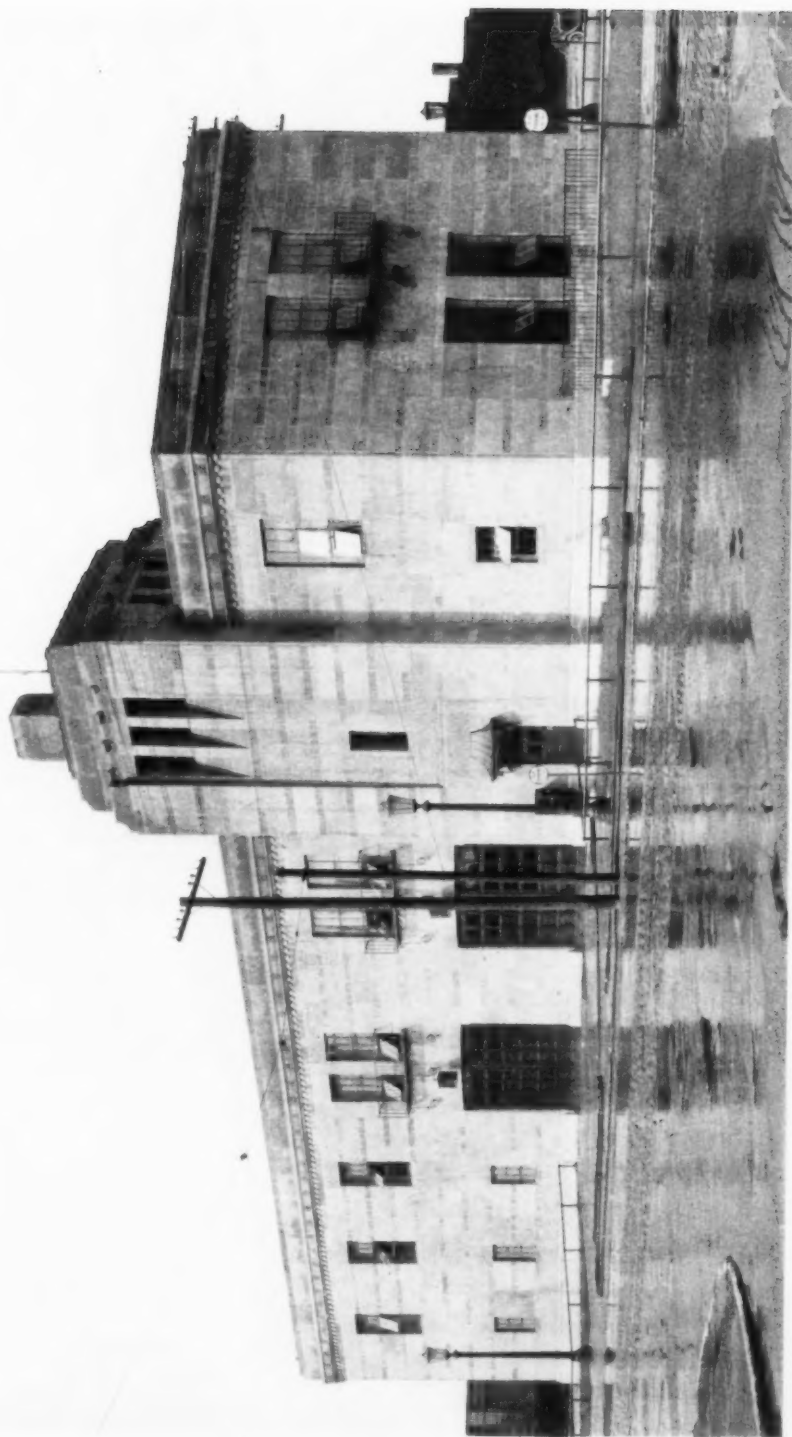
*Photo, Amemiya*



RESIDENCE OF GEORGE TOWNSEND, ESQ., GREENWICH, CONN.  
Frank P. Whiting, Architect





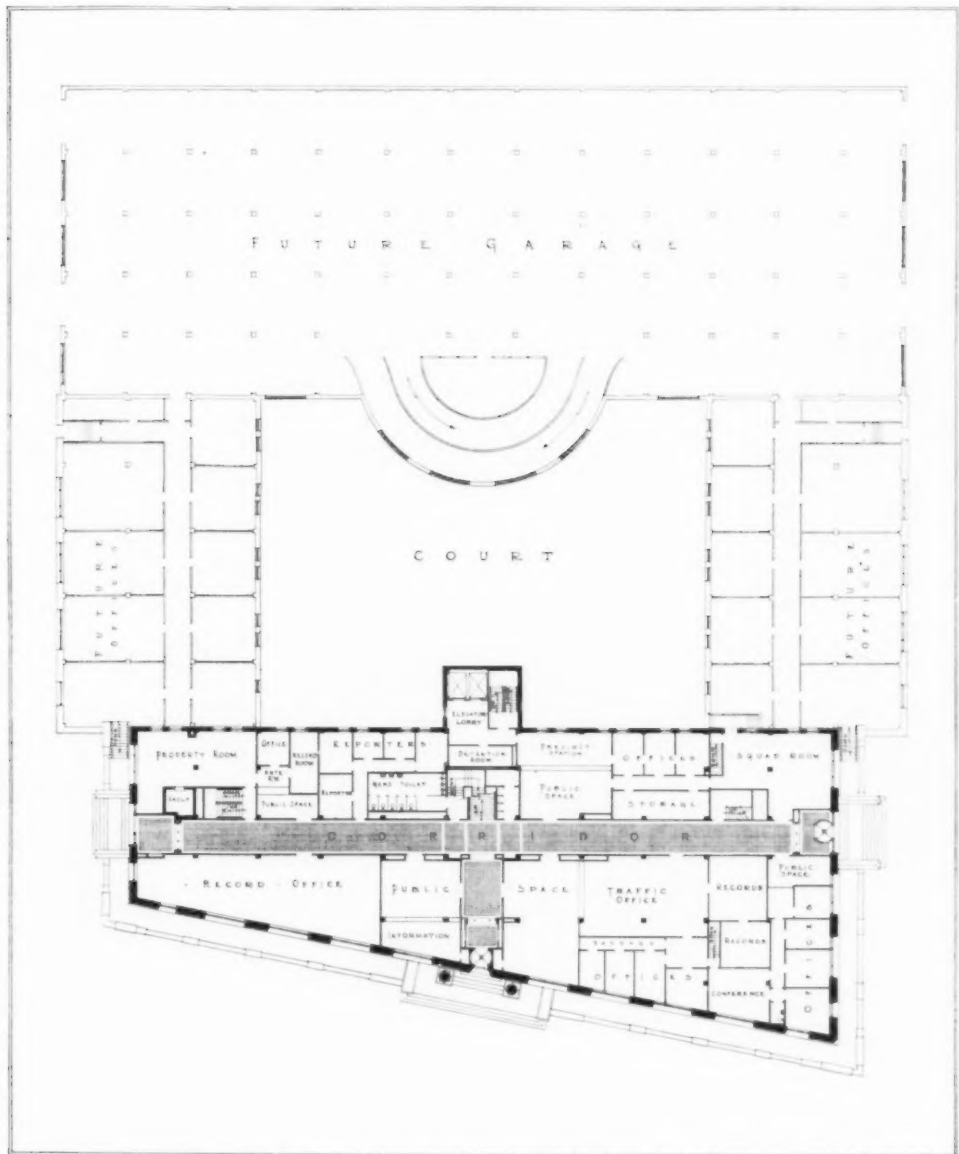


FIRE STATION NO. 26 AND SIGNAL HEADQUARTERS, CLEVELAND, OHIO  
Herman Kregelius, Architect.





POLICE HEADQUARTERS BUILDING, CLEVELAND, OHIO  
Herman Kregelius, Architect.



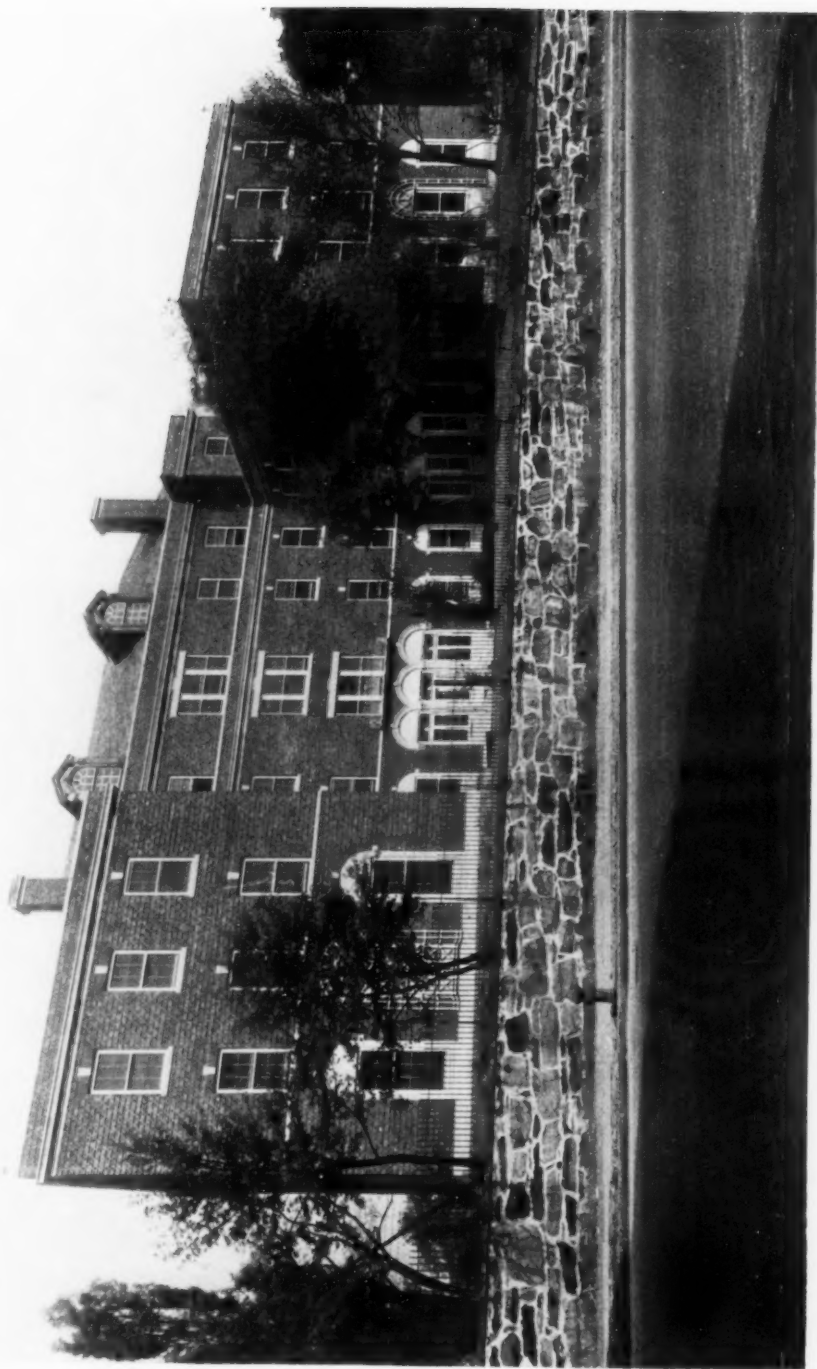
First Floor Plan  
 POLICE HEADQUARTERS BUILDING, CLEVELAND, OHIO  
 Herman Kregelius, Architect.



Main Entrance  
POLICE HEADQUARTERS BUILDING, CLEVELAND, OHIO  
Herman Kregelius, Architect.







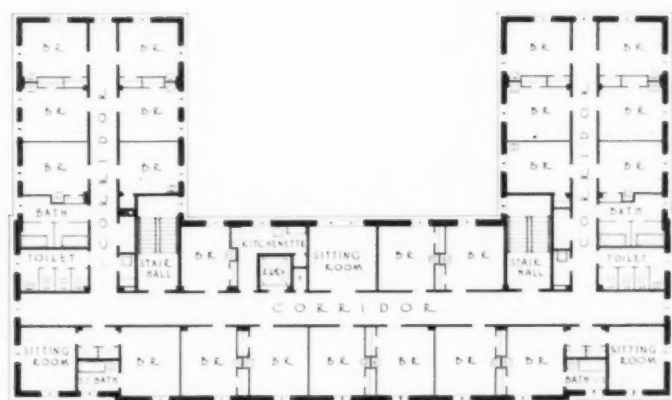
HOME FOR INCUBABLES, BRONX, N. Y.  
Crow, Lewis & Wick, Architects





NURSES' HOME, HOME FOR INCURABLES, BRONX, N. Y.  
Crow, Lewis & Wick, Architects

NEW NURSES HOME FOR THE HOME-FOR-INCURABLES - N.Y.C.



TYPICAL FLOOR PLAN



FIRST FLOOR PLAN



CROW, LEWIS & WICK - ARCHITECTS



DETAIL, NURSES' HOME, HOME FOR INCURABLES, BRONX, N. Y.  
Crow, Lewis & Wick, Architects

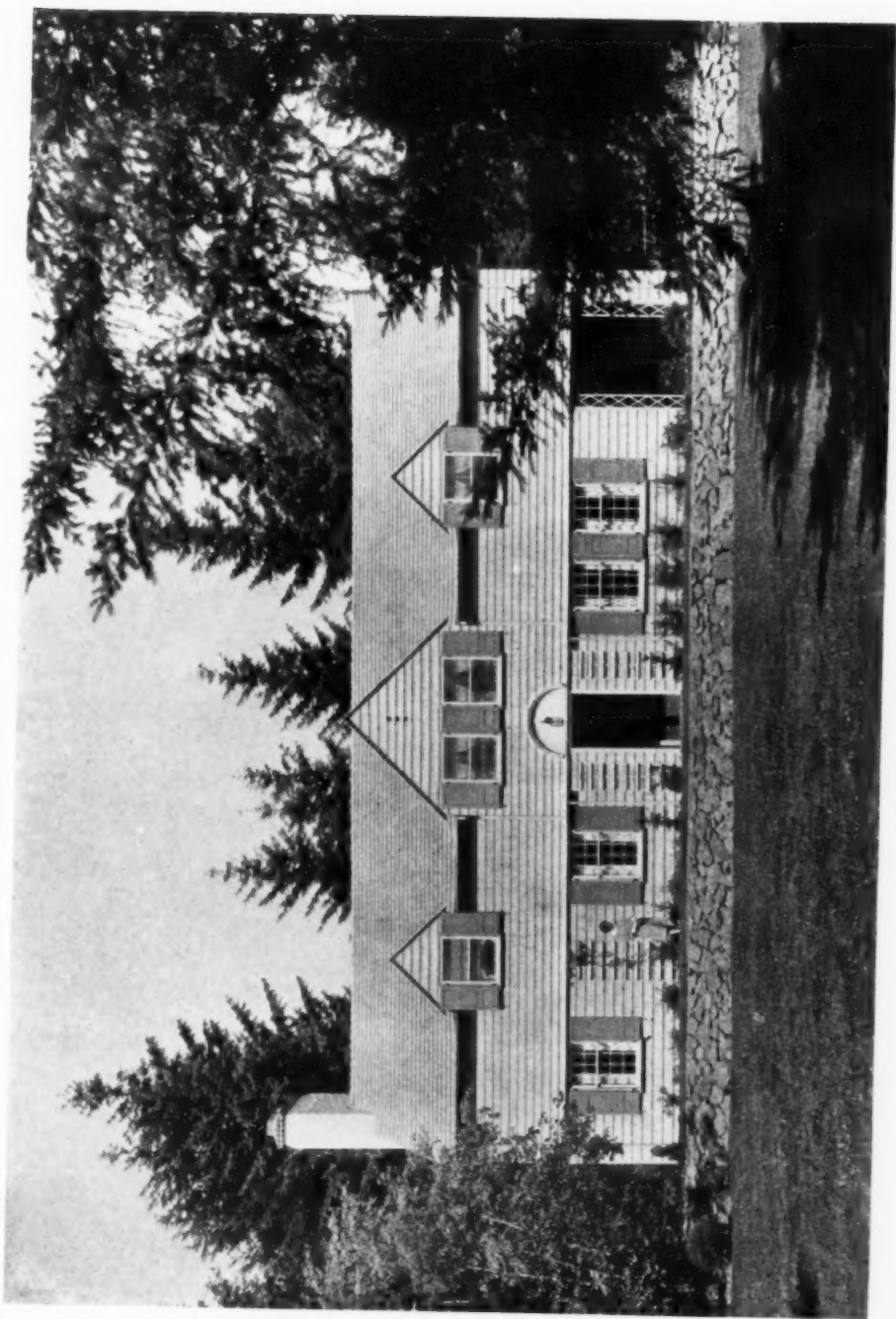




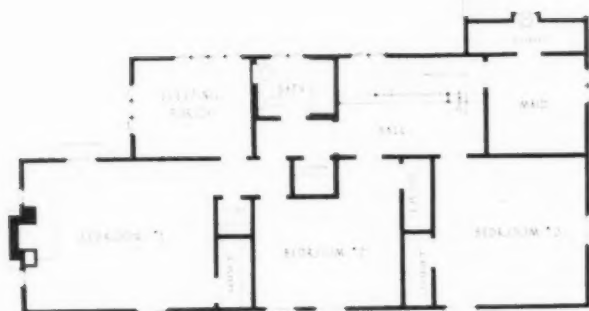


NURSES' HOME, HOME FOR INCURABLES, BRONX, N. Y.  
Crow, Lewis & Wick, Architects

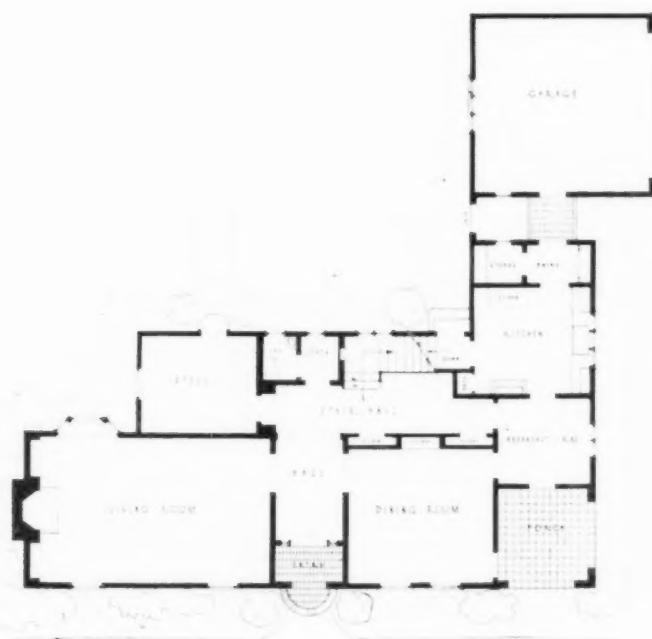




RESIDENCE OF GEORGE W. HERRON, ESQ., DUNTHORPE, PORTLAND, OREGON  
Harold W. Doty, Architect



PLAN OF SECOND FLOOR



PLAN OF FIRST FLOOR

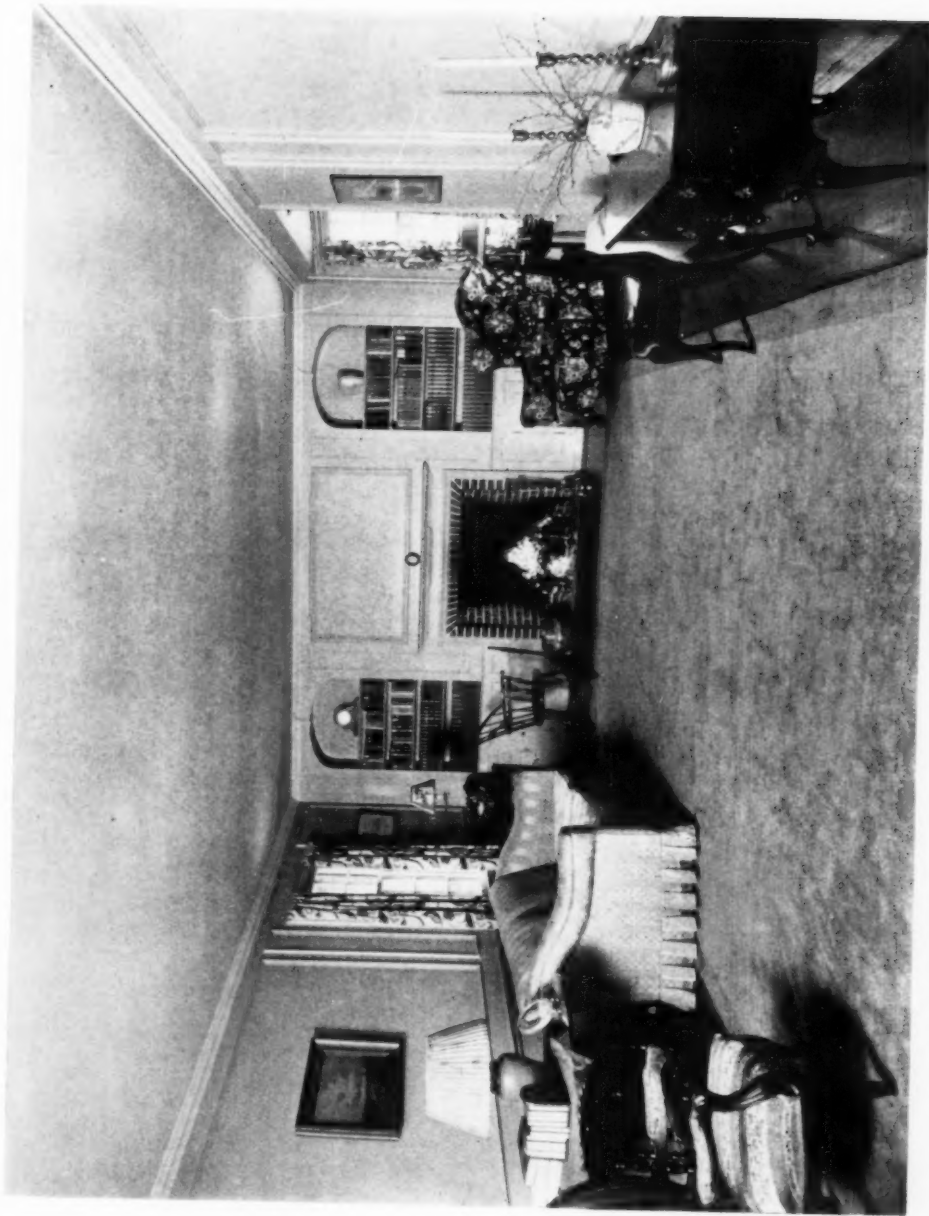
RESIDENCE OF GEORGE W. HERRON, ESQ., DUNTHORPE, PORTLAND, OREGON  
Harold W. Doty, Architect



Entrance Detail  
RESIDENCE OF GEORGE W. HERRON, ESQ., DUNTHORPE, PORTLAND, OREGON  
Harold W. Doty, Architect

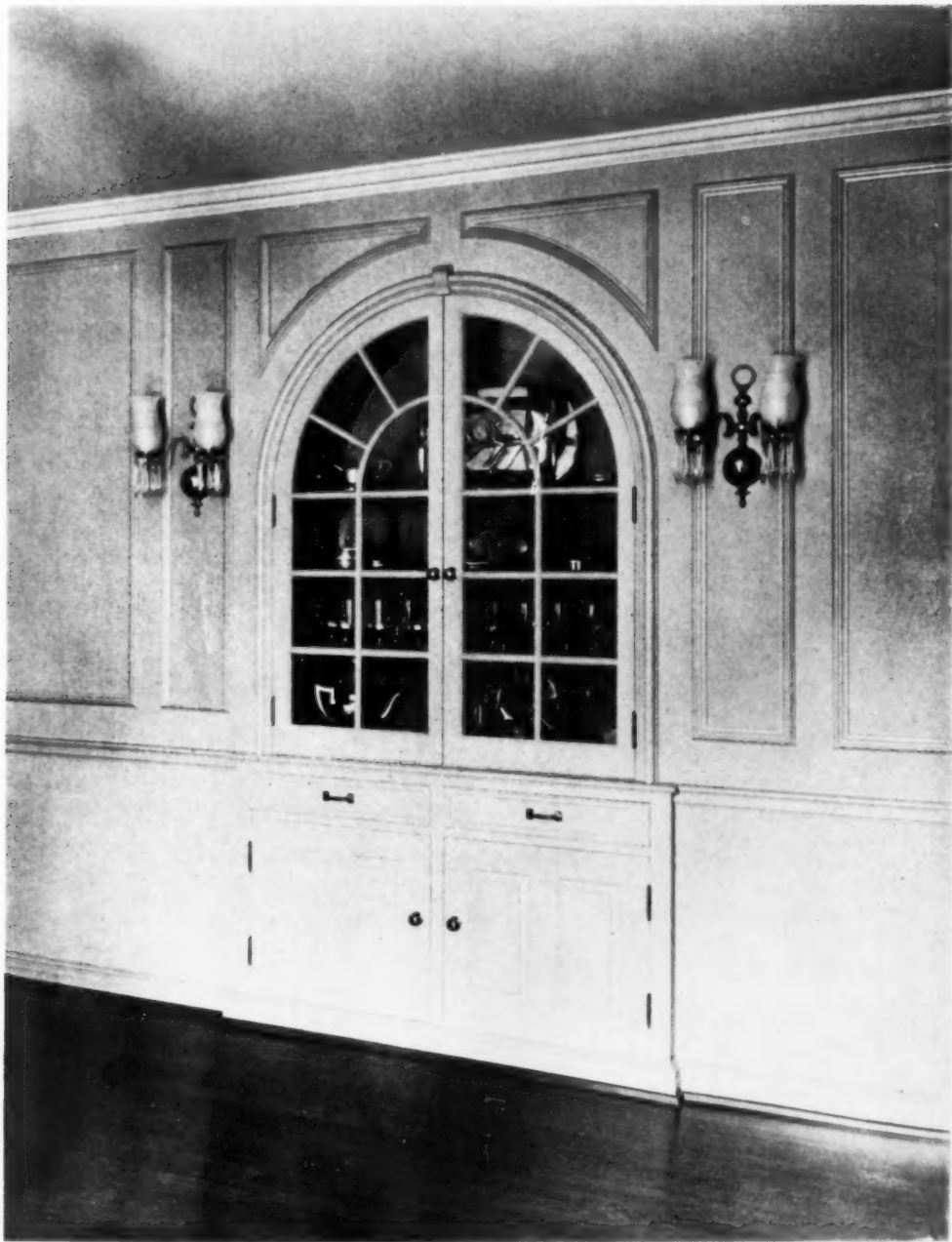






Living Room  
RESIDENCE OF GEORGE W. HERRON, ESQ., DUNTHORPE, PORTLAND, OREGON  
Harold W. Doty, Architect





China Cupboard in Dining Room  
RESIDENCE OF GEORGE W. HERRON, ESQ., DUNTHORPE, PORTLAND, OREGON  
Harold W. Doty, Architect



# NORTH ITALIAN BRICKWORK

By  
*Myron Bement Smith*

## PART II. THE EARLY RENAISSANCE IN MILAN

THE GROUPING of the material in these articles, due to the limitation of the series, is not that which an extended treatise would make possible. Neither a strictly chronological nor a geographical arrangement seems to satisfy the purpose, which is to give a general view rather than a minute study of the subject, North Italian Brickwork. By allowing the material to group itself naturally, rather than conform to a more arbitrary sequence, the author hopes to present his report much in the manner that it was compiled, as a succession of *e n t h u s i a s m s*. The present installment, having to do with the earliest Renaissance in Milan, re-

sulted from a reaction following three weeks' study of the older monuments of that city, so rich in brickwork of all periods. Due to its location on the plateau of the Po, where any stone larger than gravel is alien, the native material for building in Milan has been brick baked from the deposits of clay that is everywhere for the digging. With a history going back before Roman times, and a continued political and religious importance, Milan offers a point of departure for this study that is approached only by Bologna.

The Renaissance, in full swing at Florence under the patronage of Cosimo de' Medici, might not have reached

Milan for many years (such was the isolation of the states), had it not been for the coup d'état of the *Condottiere*, Francesco Sforza. This professional general had taken over the city in 1450 and assumed the title Duke of Milan. His first concern was to build up the Castello, a vast brick structure of a size unequalled in Italy. Then with motives nicely mixed he began to do those things becoming

his newly acquired station. Patronage of the arts being the fashion of the moment, he robbed the Medici of some of their best talent by enticing artists to his court. So it was that Filarete, Michelozzo, Bramante and Leonardo came to Milan in the services

of Francesco, and later, of Lodovico, *il Moro*. These artists, far more interested in their work than their rewards, could not be counted as a dead loss in money, for in addition to supplying the Sforzas with the background which they certainly needed, they were competent to amuse the court with painting, sculpture and pageants, and in addition supervise the design and construction of certain public buildings with which the Dukes placated the Milanese. Most important of all, these artists were all first rate military engineers, a point in their favor that made them invaluable, excusing even the casual habits of Leonardo whose waste



Brickwork Window Sill  
FIG. 2. OSPEDALE MAGGIORE, MILAN



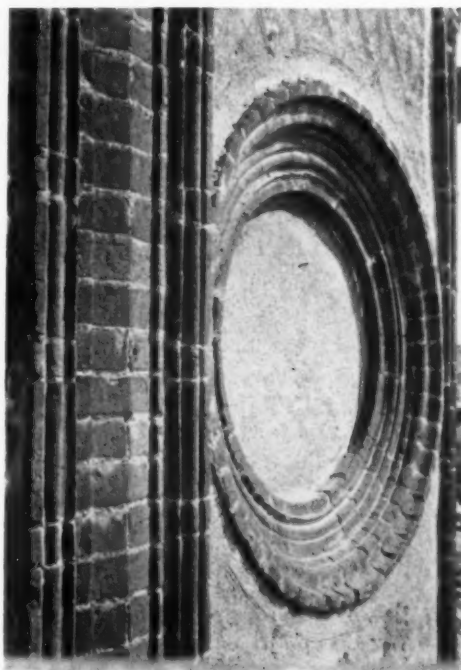
Cornice in Cortile Dei Preti.  
FIG. 1. OSPEDALE MAGGIORE, MILAN.

of good time in puttering about with botany, geology and even philosophy tried the patience of his employer. That they were spreading the Renaissance was a fact, we may be sure, of which the Sforzas, particularly Francesco, were profoundly unaware.

The Ospedale Maggiore, founded by Francesco in 1457, shows the earliest influence of the new style. As chief architect he had secured Antonio Averlino, called *Il Filarete*, and unfortunately for Filarete there were appointed for his assistants certain builders of local fame who had no intention of changing their Lombard tradition of building for the new Florentine ideas. The opposition was deeply rooted, the workmen had a way, not unknown in a more present century, of interpreting the designs according to their own fancy. They even went so far as to pull down fresh walls and rebuild them to their liking. This might well account for the mixture of Lombard-Gothic and Renaissance forms

that occur in the older portions of the hospital. In this vast building, the first municipal hospital and still one of the largest in Europe, one can see a protracted struggle of the Renaissance against the deeply rooted traditional forms, which ended some sixty years later in the façade of Ricchini.

The details selected for illustration show the early work of Filarete. The cornice (Plate I and Fig. 1), occurs on the rear of the building in a long run broken by a pediment and again as short returning motifs in the Cortile dei Preti. It is most successful in the latter position. As executed in darkly burnt brick with gesso in the recessed panels it is vigorous and brutal with an evident Lombardic flavor. Having but twenty inches projection for its five feet height, it should offer suggestion to the designer confronted with modern zoning restrictions. The window sill (Fig. 2), matches the cornice in scale and effectiveness. It is from the same court.

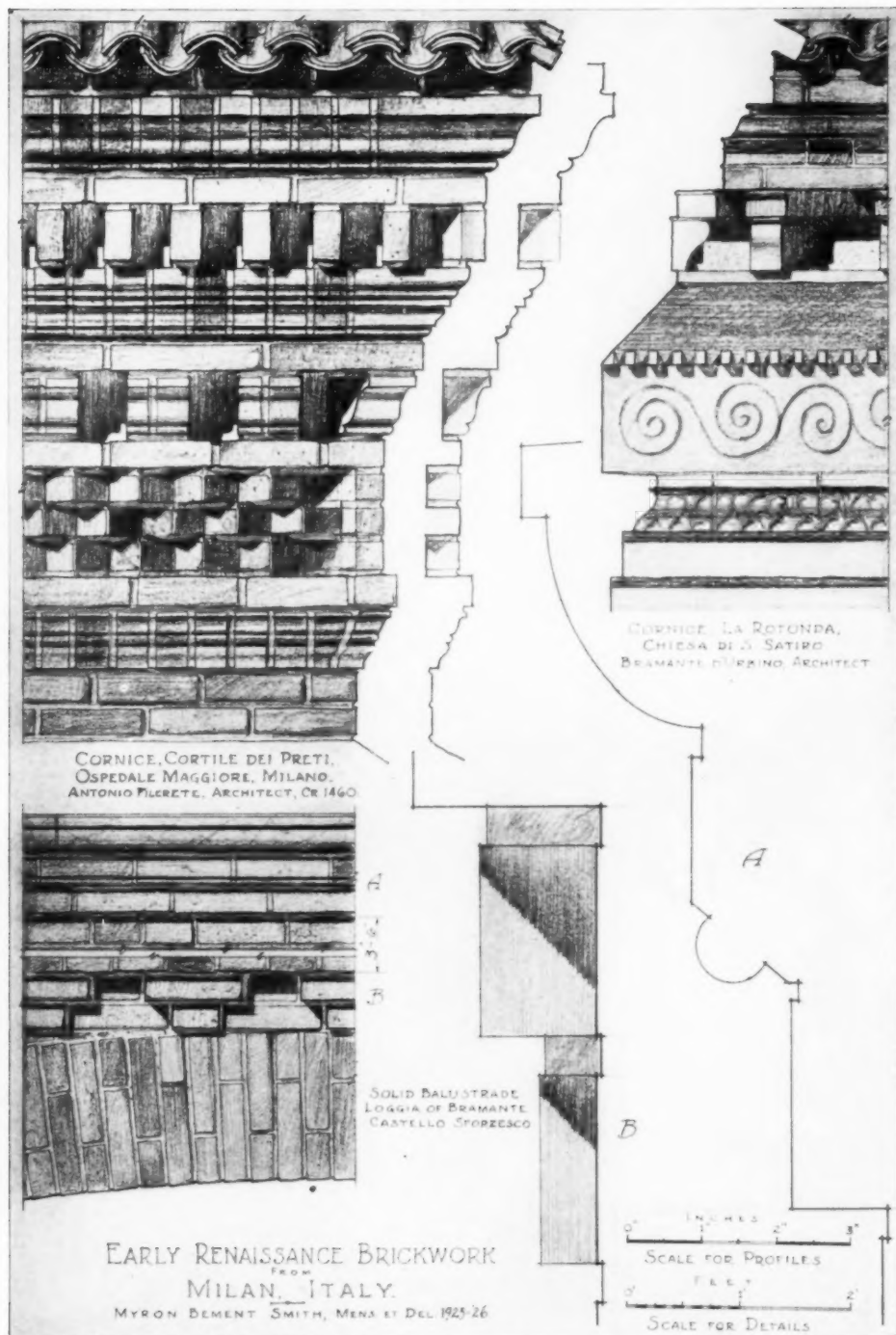


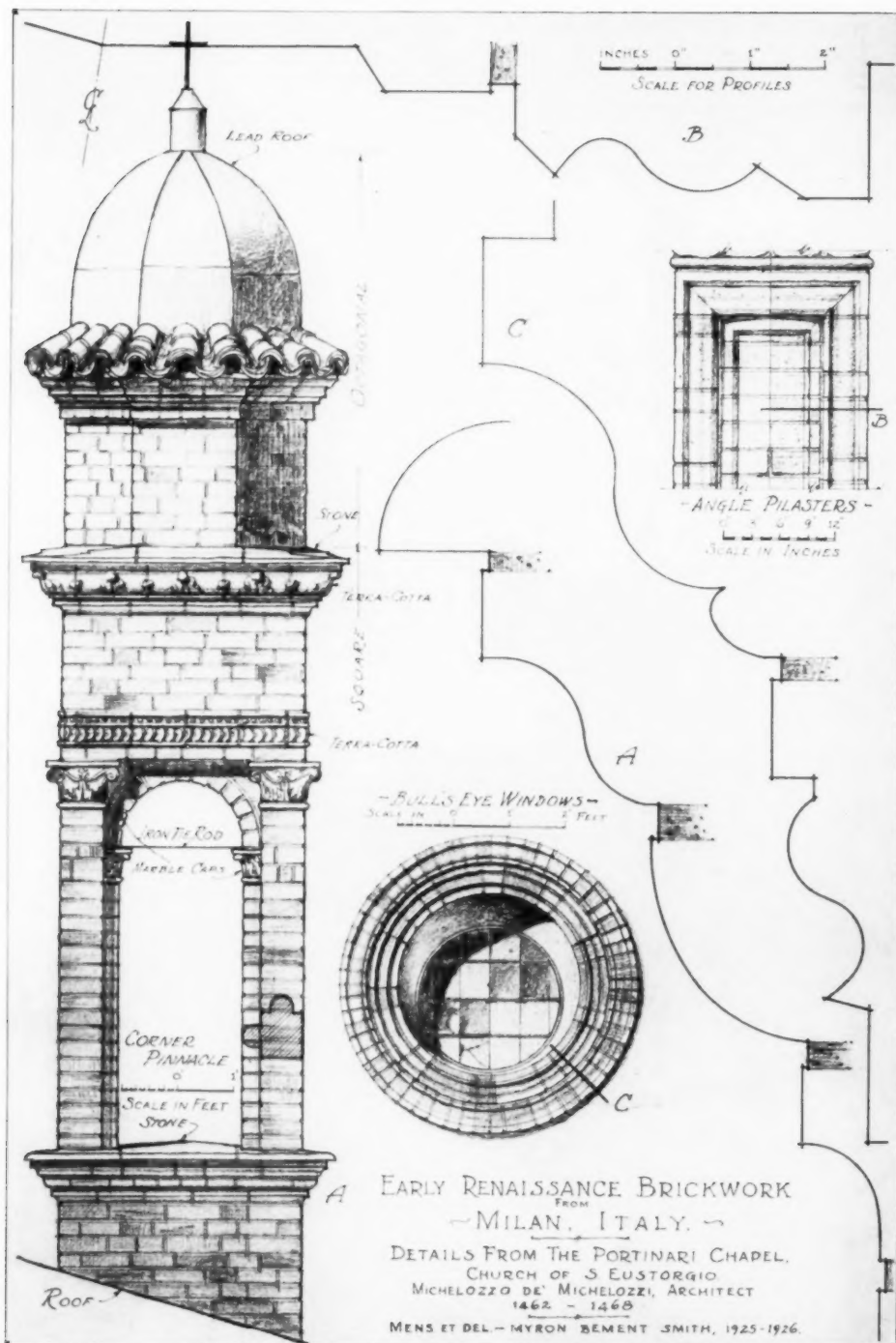
Detail of Window and Corner Pilaster  
FIG. 4. PORTINARI CHAPEL, MILAN

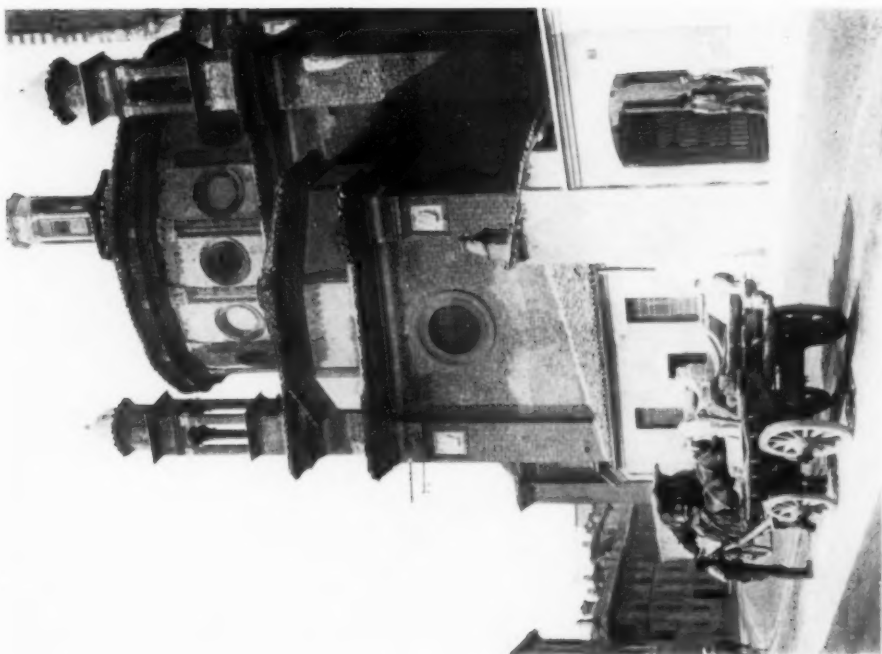




Fig. 6. La Rotondo, Church of S. Satiro, Milan  
NORTH ITALIAN BRICKWORK, PART II

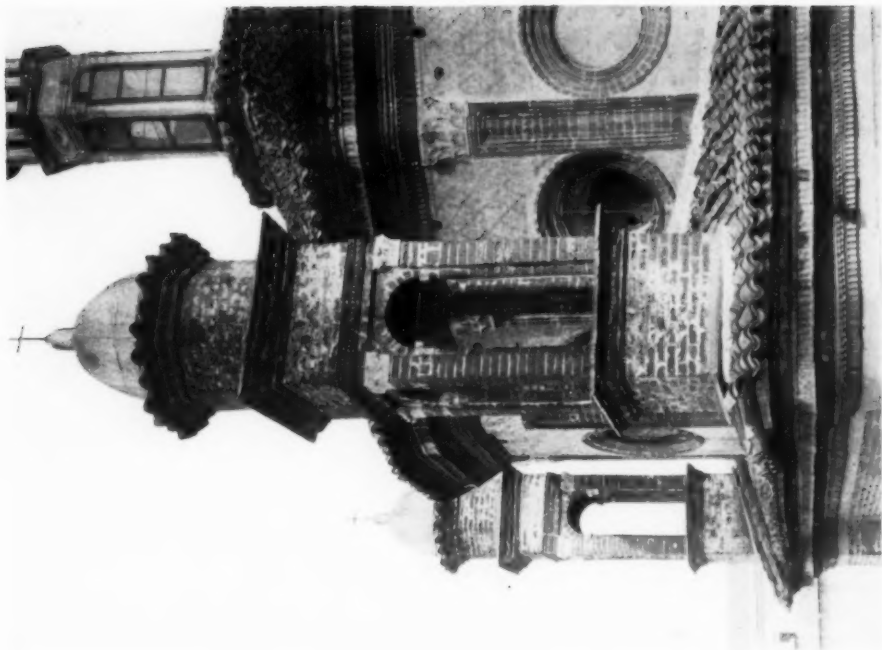






*The Architectural Record*

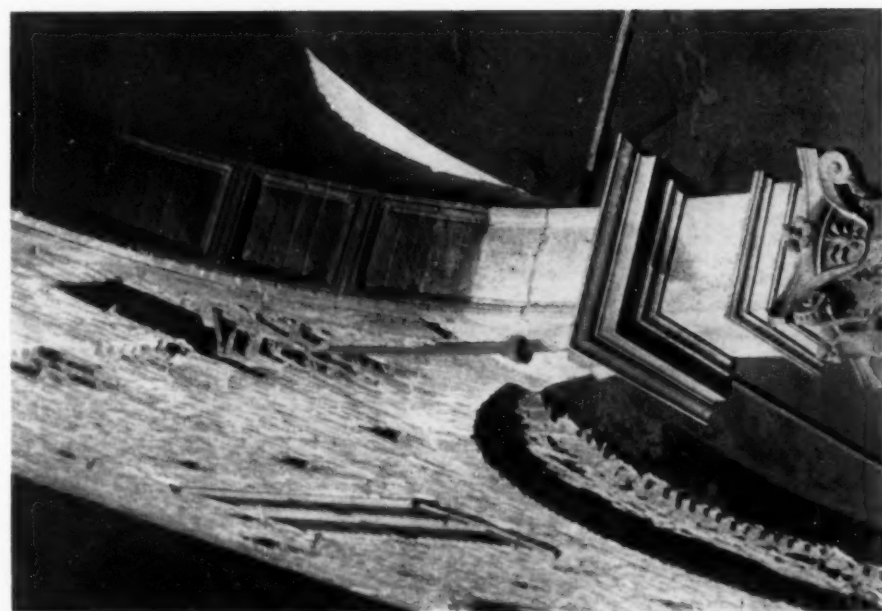
Fig. 3. The Apse End, Portinari Chapel, Milan



February, 1927

Fig. 3. Detail of Pinnacle, Portinari Chapel, Milan

NORTH ITALIAN BRICKWORK, PART II



*The Architectural Record*

Fig. 10. Carved Brick Soffit, Arcade of Canonica,  
S. Ambrogio, Milan

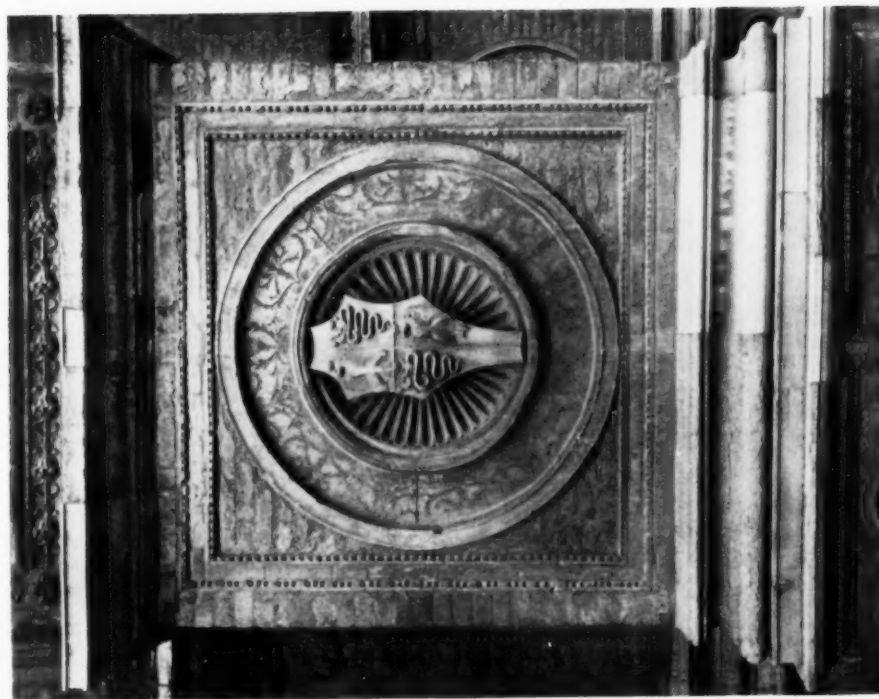


Fig. 11. Detail from Base Course, Santa Maria  
Delle Grazie, Milan

February, 1927

NORTH ITALIAN BRICKWORK, PART II





Fig. 7. Ponticella of Bramante, Castello Sforzesco, Milan



Fig. 8. Detail, Ponticella of Bramante  
NORTH ITALIAN BRICKWORK, PART II



While the hospital was building Cosimo de' Medici sent Michelozzo de' Michelozzi, architect and general practitioner in the arts, to see to the altering of a house that Francesco had presented to the Florentine envoy, Pigello Portinari. Michelozzo already had the Riccardi Palace, built for Cosimo, to his credit, and as a result he must have done something grand for Portinari, at least we may presume so, to judge by a doorway which alone remains. Portinari was pleased, for he set him to work in 1462 on a new chapel to house the bones of Peter of Verona. It was finished six years later, just in time for Portinari himself to be buried beneath it. With this building, the Portinari Chapel at S. Eustorgio, the Renaissance arrived in Milan; it remains the most important monument of the Lombard-transition style. That Bramante was inspired from it is unquestionable. The details (Plate II and Figs. 3, 4 and 5), are self explanatory.

During the last quarter of the century Milan must have been saturated with art. Bramante da Urbino, as a young man, came about 1472 to be the Ducal Engineer and Painter, a title that he soon shared with Leonardo da Vinci. He stayed until the capture of Ludovico by Louis XII of France broke up the court and sent him to his great career in Rome. Bramante was active during his twenty-eight years in Milan. Like Leonardo he gathered a school about him so that when the French invasion scattered the Renais-

sance over Europe the particular type of design known as Bramantesque found its way to Spain, France and England. His use of an artificial perspective, the first of a vogue to follow, in the church of Santa Maria presso San Satiro, was part of extensive alterations that he undertook on that edifice. The odd chapel adjoining, called La Rotonda (Fig. 6), an older and somewhat Byzantine building, he was not permitted to remove al-

though it would have helped the church plan had it been allowed; so he remodeled it as best he could, and very successfully. The cornice detail (Plate I) is undoubtedly the result of the mixture of the old work touched up in the new manner. The remaining detail on Plate I is from the *ponticella* built by Ludovico to span the moat of the Castello. This is generally ascribed to Bramante. In the photographs (Figs. 7 and 8), it is noticeable that the brickwork of the parapet portion has been restored in regular bond—a mistake, as this

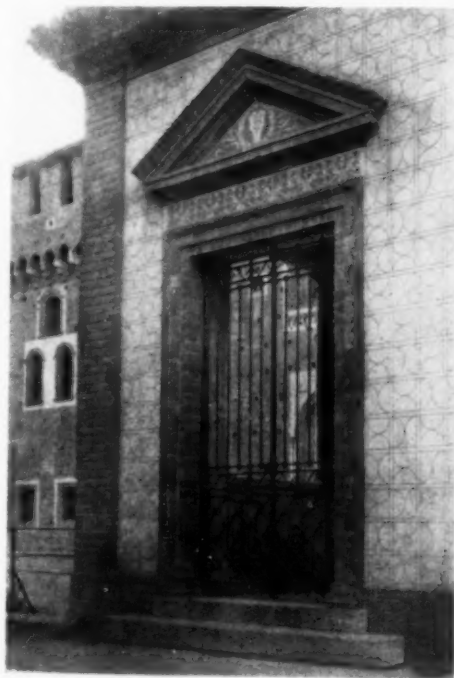


Fig. 9. Doorway to Ponticella, Castello Sforzesco, Milan

style of bricklaying was introduced from Bologna during the following century. The brick is  $2\frac{5}{8}$  in. x 5 in. x  $10\frac{1}{2}$  in., the average size of Italian brick, a fact well to bear in mind when examining the plates and photographs. The doorway (Fig. 9) is at the end of the loggia, and though restored, is an example of what moulded brickwork should be. The joints are but one-eighth inch.

The never completed Canonica of S. Ambrogio was designed by Bramante in 1492 and shows in the soffits of the

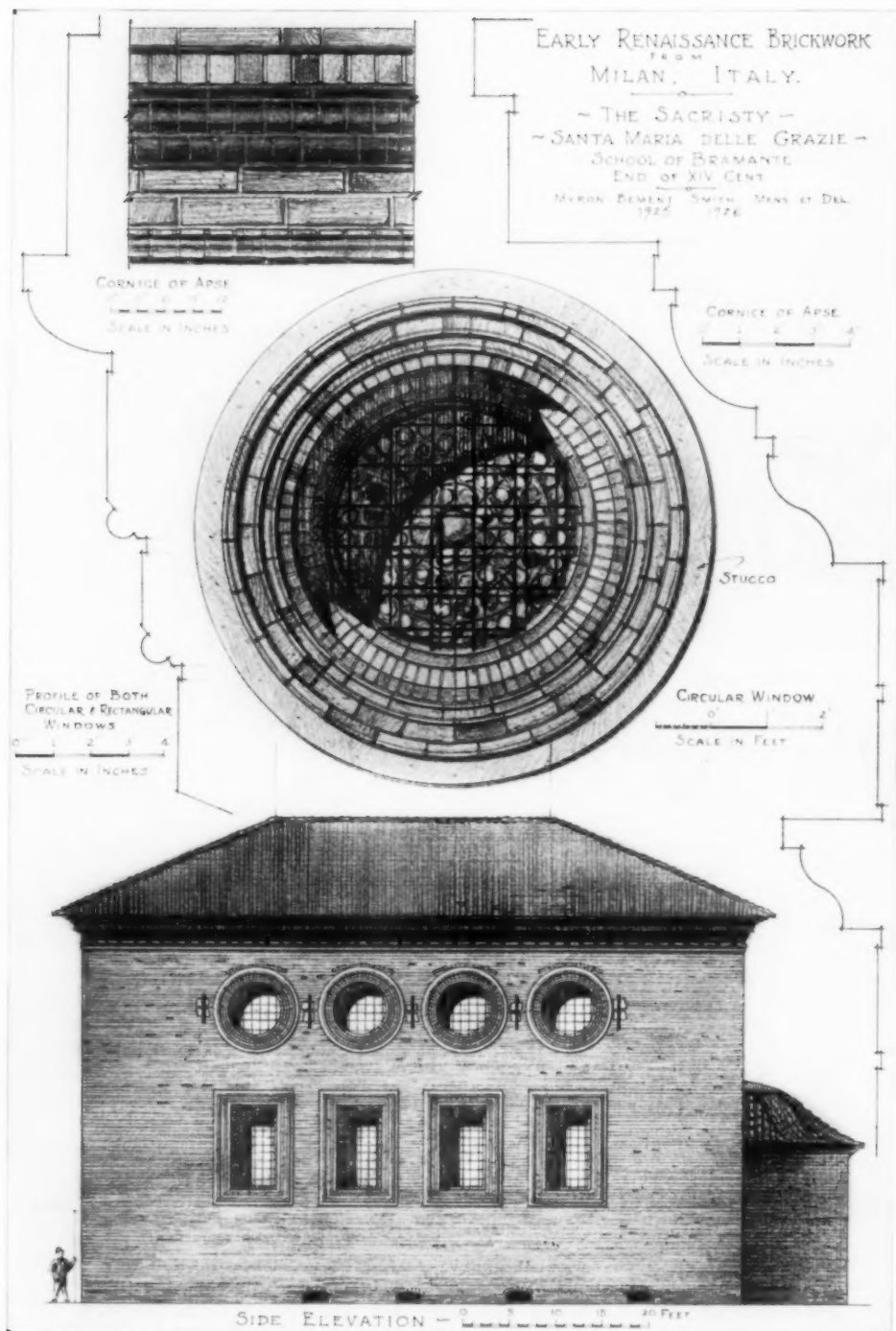


PLATE III. NORTH ITALIAN BRICKWORK. PART II



Fig. 12. Sacristy, Santa Maria Delle Grazie, Milan

arches (Fig. 10), brickwork that has been carved after building into place, the tool marks plainly visible.

Bramante's finest work in Milan is the choir and transepts of the older Gothic church of Santa Maria delle Grazie. The motif from the base course of the transept (Fig. 11) illustrates the combination of brick, marble and terra-cotta in the perfect harmony of function and decoration of which Bramante was by this time master. The sacristy of the church (Fig. 12), which Geymüller unhesitatingly ascribed to Bramante, is so situated that visitors, after viewing

Leonardo's "Last Supper," are shown through the interior, but few indeed walk back around the block to see the exterior. In proportions so pleasing, it has seemed well to show a complete elevation (Plate III), as well as details. The windows and main cornice are framed with a six inch band of gesso. The circular windows occur on the interior as openings under the penetrating vaults of the ceiling. A detail of the brickwork appears as Fig. 10 of the preceding article. The bricks are laid in one inch joints, raked one-half inch and are  $2\frac{1}{2}$  in. x 5 in. x 11 in. average size, irregular bond.

# A BIBLIOGRAPHY of ARCHITECTURAL SPECIFICATIONS

By Wilfred W. Beach

PART II (Continued from Our January Issue)

## 5. BRICK WORK

SPECIFICATIONS AND GENERAL SCHEDULE FOR A BRICK HOUSE. (See under GENERAL.)

SPECIFICATIONS FOR FACE BRICK WORK; 2-page folder; 8½ x 11.

*American Face Brick Assn.,*

*Pub., Chicago* .....Gratis

CHIMNEY DESIGN AND THEORY. By William W. Wallace; 192 pages; with specifications for brick chimneys.

*D. Van Nostrand Co., Pub.,*

*New York* .....\$3.00

## 6. FOUNDATIONS

ORDINARY FOUNDATIONS. By Chas. E. Fowler. Cofferdam data and piers, with specification information.

*John Wiley & Sons, New*

*York* .....\$5.00

FOUNDATIONS OF BRIDGES AND BUILDINGS. By Henry S. Jacoby and Roland P. Davis. 603 pages with specifications on concrete piles.

*McGraw-Hill Book Co., New*

*York* .....\$5.50

FOUNDATIONS, ABUTMENTS AND FOOTINGS. Edited by Geo. A. Hool. Specifications on concrete piles. 414 pages.

*McGraw-Hill Book Co., New*

*York* .....\$5.00

## 7—WATERPROOFING AND DAMPPROOFING

ASPHALTS AND ALLIED SUBSTANCES. By Herbert Abraham, B.S., 1920; 622 pages; cloth 6 x 9; many ills. Has specifications for asphalts, water-proofings, roofings and paving.

*D. Van Nostrand Co., Pub.,*

*New York* .....\$5.00

HANDBOOK FOR CEMENT AND CONCRETE USERS. By Lewis and Chandler. (See under CONCRETE.)

WATERPROOFING ENGINEERING. By Joseph Ross, B.S., C.E., Waterproofing Engineer; 442 pages; cloth 6 x 9; 138 figs. " . . . where possible, establishes standard methods and materials for general waterproofing." Contains specifications on Asphalt, Tar Pitch, Concrete, Creosote, Lime, etc.

*John Wiley & Sons, Inc., Pub.,*

*New York* .....\$5.00

WATERPROOFING ENGINEERING FOR ENGINEERS, ARCHITECTS, BUILDERS, ROOFERS AND WATERPROOFERS. By Joseph Ross, B.S., C.E., 1919; 452 pages; cloth 6 x 9; detailed specification on Waterproofing and Roofing.

*John Wiley & Sons, Inc., Pub.,*

*New York. (Out of print)* . . . \$5.00

## 8—STONEMWORK

ARCHITECTURAL GRANITE; 16 pages; paper 8½ x 11; 7 plates of details and photos of granite surfaces, descriptive matter and long form of specifications. (Reprint from Sweet's Cat.)

GRANITE SPECIFICATION SHORT FORM; 3 loose leaves; 8½ x 11.

*Natl Building Granite Quarries*

*Assn., Inc., Pub., Boston* . . . Gratis

A TREATISE ON MASONRY CONSTRUCTION. By Ira O. Baker, B.S., C.E., 1909; 759 pages; cloth 6 x 9; 244 ills.; 100 tables. Specifications on Cement, Concrete and Masonry.

*John Wiley & Sons, Inc., Pub.,*

*New York* .....\$5.00

# THE ARCHITECTURAL RECORD.

MASONRY. By Malverd A. Howe, C.E.; 160 pages; cloth 6 x 9; 115 figs. Part III has specifications for materials used in railroad masonry construction.

*John Wiley & Sons, Inc., Pub., New York* .....\$2.00

BUILDING CONSTRUCTION AND SUPERINTENDENCE. (3 Vols.). By F. E. Kidder, C.E., Ph.D., Architect. Revised (1909) by Thos. Nolan, M.S., A.M., F.A.I.A., Prof. of Arch. Construction, Univ. of Pa. Part I, Masons' Work. 966 pages; cloth 7 x 9 $\frac{3}{4}$ ; 628 ills. Chap. 13, pages 813 to 869, incl., Specifications on all branches Masonry.

*Wm. T. Comstock Co., New York, Pubs.* .....\$7.00

INDIANA LIMESTONE SERVICE PUBLICATIONS, Series A-3, 8 $\frac{1}{2}$  x 11. No. 1, Spec. for Cut Indiana Limestone, 10 loose sheets in folder. No. 5, Do. on 6-page folder. No. 6, Specifications and Notes on Random Indiana Limestone Ashlar, 4-page folder.

*Ind. Limestone Quarrymen's Assn., Bedford, Ind.* .....Gratis

## 9—ARCHITECTURAL TERRA COTTA

STANDARD SPECIFICATIONS FOR THE MANUFACTURE, FURNISHING AND SETTING OF TERRA COTTA, 1923; 12 pages; paper 8 $\frac{1}{2}$  x 11.

*Nat'l. Terra Cotta Society, Pub., New York* .....Gratis

## 10—BLOCK CONSTRUCTION

HOLLOW TILE CONSTRUCTION. By J. J. Cosgrove; 256 pages; flex 4 $\frac{3}{4}$  x 7; 145 figs., 70 plates. Chapters on walls, floors, roofs, partitions and framework.

*William T. Comstock Co., Pub., New York* .....\$2.50

HOLLOW TILE CONSTRUCTION AND STUCCO FINISH. By Chas. E. White, Jr., 1924; Edited by W. S. Lowndes, Ph.B., A.I.A.; 82 pages; cloth 6 x 8 $\frac{1}{2}$ ; 67 figs. Contains in-

formation for specification writing.

*David McKay Co., Pub., Philadelphia* .....\$1.50

CONCRETE BLOCK MANUFACTURE. By Harman H. Rice, 152 pages with specifications for manufacture and use.

*The Engineering News Pub. Co., New York* .....(Out of print)

## 11—PAVING

ASPHALT, Pocket Reference for Engineers, Rev. 1924; 72 pages; paper 3 $\frac{1}{2}$  x 5 $\frac{3}{4}$ ; Definitions, Tests and complete and condensed specifications for asphalt pavement and pavement foundations.

*The Asphalt Assn., Pub., New York* .....Gratis

SPECIFICATIONS FOR (A-1) ASPHALT MACADAM SURFACE COURSE; (A-3) ASPHALTIC CONCRETE SURFACE COURSE; (A-4) SHEET ASPHALT BINDER AND SURFACE COURSES; (B-7) ASPHALT MACADAM BASE; (B-8) ASPHALT CONCRETE BASE; 4-page folders with inserts "Important Notice to Engineers," 8 $\frac{1}{2}$  x 11. Recent Rev's.

*The Asphalt Assn. Pub., New York* .....Gratis

ASPHALT AND ALLIED SUBSTANCES. By H. Abraham. (See under WATER-PROOFING.)

HIGHWAYS ENGINEERS' HANDBOOK. By Wilson G. Harger and Edmund A. Bonney; 700 pages; flex 4 x 7; ills. "Covers all types of road construction." Chap. XVI contains specifications.

*McGraw-Hill Book Co., Inc., Pub., New York* .....\$5.00

(AMERICAN) HIGHWAY ENGINEERS' HANDBOOK. By Arthur H. Blanchard, C.E., A.M., Editor-in-chief; 1658 pages; flex cloth 4 $\frac{1}{4}$  x 7; many ills. Art. 14 of Sec. 21 has general clauses of specifications. "All branches of highway engineering and related subjects are covered in a reliable and comprehensive manner."

*John Wiley & Sons, Inc., Pub., New York* .....\$6.00

- THE CONSTRUCTION OF VITRIFIED BRICK PAVEMENTS, including Recommended Specifications, 1924; 92 pages; boards 6 x 9; 54 ills. "The outline . . . should be sufficiently inclusive . . . to give the student of highway engineering or the practicing engineer . . . a definite picture of the particular features involved in the design and construction of vitrified brick pavements." *National Paving Brick Mfrs. Assn., Cleveland, O.* . . . . .*Gratis*
- MATERIALS FOR ROAD CONSTRUCTION, Final Report of the Special Committee on Materials for Road Construction and on Standards for Their Test and Use. 86 pages; paper 6 x 9. Reprinted from "Transactions," 1918. *American Society of Civil Engineers, Pub., New York* . . . . .70c
- (SPECIFICATIONS FOR) PORTLAND CEMENT CONCRETE PAVEMENT FOR HIGHWAYS; 1925; 19 pages; paper 6 x 9. *American Concrete Institute, Pub., Detroit* . . . . .*Gratis*
- (SPECIFICATIONS FOR) PORTLAND CEMENT CONCRETE PAVEMENT FOR CITY STREETS AND ALLEYS; 1925; 19 pages; paper 6 x 9. *American Concrete Institute, Pub., Detroit* . . . . .*Gratis*
- (CONSTRUCTION OF) ROADS AND PAVEMENTS. By Thomas R. Agg, C.E., 1924; 519 pages; cloth 6 x 9; 116 ills. Contains specifications for asphalt blocks, asphalt cement, binders, creosote, pitch and kindred materials. *McGraw-Hill Book Co., Inc., Pub., New York* . . . . .\$4.00
- (SPECIFICATIONS FOR) STREET ROADWAY PAVEMENTS, With Instructions to Inspectors on Street Paving Work. By S. Whinery, 1913; 116 pages, cloth 6 x 9. Has specifications on asphalt, granite block, brick, wood-block, bituminous concrete, hydraulic concrete, and concrete sidewalks. *McGraw-Hill Book Co., Inc., Pub., New York* . . . . .\$1.00
- 12—ROOFING, SHEET METAL AND SKYLIGHTS
- ANCHORAGE OF ROOFS, 1913; 6 pages; paper 4 3/4 x 7 1/4; 8 ills. *Associated Factory Mutual Fire Ins. Co's., Pub., Boston* *Gratis*
- (STANDARD FOR CLASS C.) ASPHALT RAG- FELT, PREPARED ROOFING AND SHINGLES, Rev. to date; 60 pages; L. L. paper binder 6 x 9; 18 ills. and charts. I, General Information; II, Specifications; III, Tests; IV, Inspection. *Underwriters' Laboratories, Pub., Chicago* . . . . .\$1.00
- (SPECIFICATIONS) TIN-CLAD FIRE DOORS AND SHUTTERS, 1925; 26 pages; paper 4 3/4 x 7 1/4; 27 ills. *Associated Factory Mutual Fire Ins. Co's., Pub., Boston* . . . . .*Gratis*
- (STANDARDS FOR) TIN-CLAD FIRE DOORS AND SHUTTERS, Rev. to date; 58 pages; L. L. paper binder 6 x 9; 6 plates of details; I, General Information; II, Specifications; III, Inspection; IV, Laboratory Methods. *Underwriters' Laboratories, Pub., Chicago* . . . . .50c
- 13—STRUCTURAL STEEL AND IRON
- (STANDARD SPECIFICATION FOR) THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, 1923; 23 pages; paper 3 3/4 x 6 3/4. *American Institute of Steel Construction Pub., New York and Cleveland* . . . . .25c
- THE DESIGN OF STEEL MILL BUILDINGS. By M. S. Ketchum. (See under GENERAL.)
- THE DESIGN OF MINE STRUCTURES. By M. S. Ketchum. (See under GENERAL.)
- DETAILING AND FABRICATING STRUCTURAL STEEL. By F. W. Dencer; 1924; 511 pages; cloth 6 x 9; 328



- ills. " . . . a study of structural designs and specifications, and a description of methods of handling contracts, ordering material, making shop drawings, fabricating, inspecting and shipping steel."  
*McGraw-Hill Book Co., Inc.,*  
*Pub., New York . . . . .*\$5.00
- STEEL CONSTRUCTION. By Henry J. Burst, C.E., 1914; 372 pages; flex. 6 x 9; 215 ills.; Pages 349 to 372 have specifications for structural steel work.  
*American Technical Society,*  
*Pub., Chicago . . . . .*\$2.50
- STEEL CONSTRUCTION, Steel and Iron, Explanation of Formulas, Standard Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, Code of Standard Practice. 1925; 78 pages; paper 5¼ x 8.  
*American Institute of Steel Construction, Pub., New York and Cleveland . . . . .*50c
- (STANDARD SPECIFICATIONS FOR) STRUCTURAL AND BOILER STEEL; Rev. 1923; 12 pages; paper 4 x 6½.  
*The Assn., of American Steel Mfrs., Pub., Pittsburgh. . .*Gratis
- STRUCTURAL STEELWORK. By Ernest G. Beck; 462 pages; cloth 6 x 9; 300 diagrams. "Relating principally to the (design and) construction of steel-framed buildings." Page 3 has specifications on materials.  
*Longmans, Green & Co., Pub.,*  
*New York . . . . .*\$7.50
- STRUCTURAL ENGINEERING. By Joseph Husband and William Harby; 770 pages; cloth 6 x 9; 393 diagrams. Page 4 has specifications for brickwork. Chap. XI deals with specifications for stone masonry.  
*Longmans, Green & Co., Pub.,*  
*New York . . . . .*\$5.00
- (STANDARD SPECIFICATIONS) STEEL FOR BRIDGES, BUILDINGS, LOCOMOTIVES, CARS AND SHIPS, BOILERS AND RIVETS, CONCRETE REINFORCEMENT, AND SHAFTS, 1922; 156 pages; boards and leather; 5 x 7½; ills.  
*Carnegie Steel Co., Pub., Pittsburgh, Pa. . . . .*Gratis
- DETAILING AND FABRICATING STRUCTURAL STEEL. By Frederick W. Deneer, with specifications for structural steel.  
*McGraw-Hill Book Co., Inc.,*  
*Pub., New York . . . . .*\$5.00
- 18—VAULTS AND SAFES
- STANDARDS ON SAFES AND INSULATED CABINETS, Rev. to date; mimeo; L.L. paper binder 8½ x 11.
- STANDARD ON MINIMUM BURGLARY RESISTANCE OF SAFES AND CABINETS, Rev. to date; mimeo; L. L. paper binder 8½ x 11.  
*Underwriters' Laboratories*  
*Pub., Chicago . . . . .*Each 50c
- 19—CARPENTRY
- SIMPLIFIED PRACTICE RECOMMENDATION No. 16, Rev. 1926; 87 pages; paper 6 x 9; Issued by U. S. Bureau of Standards in furtherance of Elimination of Waste; recommends standard forms, grades and practice.  
*Government Printing Office, Pub.,*  
*Washington, D. C. . . . .*15c
- Beech—See MAPLE.  
 Birch—See MAPLE.  
 Cedar, Incense—See CALIFORNIA WHITE AND SUGAR PINE.  
 Cedar, Western Red:—
- OFFICIAL SPECIFICATIONS FOR STANDARD CEDAR PILING adopted January 13, 1914; 1-page leaflet; 3¼ x 6.  
*Western Red Cedar Assn.,*  
*Pub., Spokane, Wash. . . . .*Gratis
- OFFICIAL SPECIFICATIONS COVERING WESTERN RED CEDAR AXE SPLIT AND ROUND POSTS. Adopted January 13, 1925; 3-page folder; 3¼ x 6.  
*Western Red Cedar Assn.,*  
*Pub., Spokane, Wash. . . . .*Gratis
- OFFICIAL SPECIFICATIONS FOR WESTERN RED CEDAR POLES as revised April 30, 1918.  
*Western Red Cedar Assn., Pub.,*  
*Spokane, Wash. . . . .*Gratis
- See also FIR, DOUGLAS.  
 Cedar, Northern White:—
- OFFICIAL SPECIFICATIONS—WHITE CEDAR PRODUCTS:—  
*Northern White Cedar Assn.,*  
*Pub., Minneapolis . . . . .*Gratis



THE ARCHITECTURAL RECORD.

- STANDARD SPECIFICATIONS GOVERNING THE MANUFACTURE AND GRADING OF NORTHERN WHITE CEDAR PRODUCTS; Rev. 1923; 12 pages; paper  $3\frac{1}{4} \times 5\frac{1}{2}$ .  
*Northern White Cedar Assn., Pub., Minneapolis* . . . . .Gratis
- OFFICIAL MANUFACTURING SPECIFICATIONS GOVERNING THE MANUFACTURE OF WHEELS AND GEAR BLANKS, AXLES AND GRADING OF NORTHERN WHITE CEDAR POLES, 16 feet and Longer; 1925; 4-page folder  $3\frac{1}{2} \times 6\frac{1}{2}$ .  
*Northern White Cedar Assn., Pub., Minneapolis* . . . . .Gratis
- OFFICIAL SPECIFICATIONS GOVERNING THE MANUFACTURE AND GRADING OF NORTHERN WHITE CEDAR POSTS, 1925; single loose-leaf  $8\frac{1}{2} \times 11$ .  
*Northern White Cedar Assn., Pub., Minneapolis* . . . . .Gratis
- ROOF SPECIFICATIONS FOR "HALF-CENTURY" BRAND AND GRADING RULES OF "LIFE LONG" WHITE CEDAR SHINGLES; 4-page folder; paper  $3\frac{1}{2} \times 7$ .  
*Northern White Cedar Shingle Mfrs. Assn., Pubs., Oshkosh, Wis.*, . . . . .Gratis
- Cypress*—See HARDWOOD.  
*Fir, Douglas*:—
- EXPORT BASIC SCHEDULE AND GRADING RULES, ETC. of Douglas Fir, Pacific Hemlock, Sitka Spruce, Western Red Cedar and Port Orford Cedar Lumber, 1924; 73 pages; paper  $4 \times 9$ ; with tables and patterns.  
*Pacific Lumber Inspection Bureau, Inc., Pub., Seattle* . . . . .Gratis
- STANDARD GRADING AND DRESSING RULES for DOUGLAS FIR, SITKA SPRUCE, WEST COAST HEMLOCK and WESTERN RED CEDAR PRODUCTS, Including American Lumber Standard Sizes, 1926; 103 pages; paper  $4 \times 6\frac{1}{2}$ ; 31 details of patterns.  
*West Coast Lumbermen's Assn., Pub., Seattle, Wash.* . . . . .25c
- Fir, White*—See PINE, PONDOSA.  
*Hardwood*:—
- RULES FOR MEASUREMENT AND INSPECTION OF HARDWOOD LUMBER, CYPRESS, VENEERS, THIN LUMBER AND PLYWOOD, 1925; 80 pages; paper  $3\frac{1}{2} \times 6$ .  
*National Hardwood Lumber Assn., Pubs., Chicago* . . . . .Gratis
- Hemlock*—See FIR, DOUGLAS.  
*Larch*—See PINE, PONDOSA.  
*Lath*—See CALIFORNIA WHITE and SUGAR PINE.  
*Mahogany*:—
- STATELY MAHOGANY and HISTORIC MAHOGANY; 16-page booklet; paper  $5\frac{1}{2} \times 8$ ; descriptive, but without real specifications.  
*The Mahogany Assn., Inc., Pub., New York City* . . . . .Gratis
- Maple*:—
- GRADING RULES FOR MAPLE, BEECH AND BIRCH FLOORING, 1926; 11 pages; paper  $3\frac{1}{2} \times 6\frac{1}{4}$ .  
*Maple Flooring Mfrs. Assn., Pub., Chicago* . . . . .Gratis
- HOW TO LAY AND FINISH MAPLE, BEECH AND BIRCH FLOORING, 1924; 16 pages; paper  $3\frac{1}{2} \times 6\frac{1}{4}$ .  
*Maple Flooring Mfrs. Assn., Pub., Chicago* . . . . .Gratis
- Pine, Idaho White*—See PINE, PONDOSA.  
*Pine, North Carolina*:—
- OFFICIAL INSPECTION RULES Covering Kiln and Air Dried North Carolina Pine, Long Leaf Pine, Air Dried Roofers, Short Leaf Pine Dimensions, Rev. 1926; 47 pages; paper  $4 \times 6\frac{1}{4}$ ; with tables and patterns.  
*The North Carolina Pine Assn., Pub., Norfolk, Va.* . . . . .Gratis
- Pine, Northern*:—
- RULES FOR GRADING NORTHERN PINE, SPRUCE AND TAMARACK LUMBER, Revised 1925; 63 pages; paper  $3\frac{1}{2} \times 5\frac{1}{4}$ .  
*Northern Pine Mfrs. Assn., Pubs., Minneapolis* . . . . .Gratis
- Pine, Pondosa*:—
- RULES FOR THE GRADING OF PONDOSA

# THE ARCHITECTURAL RECORD.

- PINE, IDAHO WHITE PINE, LARCH AND FIR, WHITE FIR, CEDAR AND SPRUCE LUMBER, 1925; 88 pages; paper 3½ x 5¼; 3 plates of details. Recommended by Bureau of Grades. "Now being manufactured in territory between Rocky Mts. on the east, Cascade Mts. on the west, British Col. line on north and to and including Oregon and Southern Idaho on the south."  
*Western Pine Mfrs. Assn., Pub., Portland, Ore.*.....Gratis
- Pine, Southern Yellow:*—  
DRY ROT IN FACTORY TIMBERS, 1922; 126 pages; paper 4¾ x 7¼; 88 ills.  
F. M. SPECIFICATIONS FOR LONGLEAF PINE FACTORY TIMBER, 1916; 4-page folder; 4¾ x 7¼.  
*Associated Factory Mutual Fire Ins. Co's, Pub., Boston.*....Gratis
- MECHANICAL AND PHYSICAL PROPERTIES OF SOUTHERN YELLOW PINE. Specification and Design Information and Data for the Use of Architects and Engineers, Technical Bulletin No. 3; 1926; 8 pages; paper 8½ x 11.  
*Southern Pine Assn., Pub., New Orleans* .....Gratis
- SOUTHERN PINE MANUAL OF STANDARD WOOD CONSTRUCTION; 198 pages; flex, 4½ x 6½; many tables, rules and data for specification writing.  
*Southern Pine Assn., Pubs., New Orleans* .....\$1.50
- See also PINE, NORTH CAROLINA.
- Plywoods:*—  
CLASSIFICATION OF PLYWOODS (Veneers). Single loose-leaf 8½ x 11. Adopted 1921.  
*Plywood Mfrs. Assn., Pubs., Chicago* .....Gratis
- See also HARDWOOD.
- Redwood, California:*—  
CALIFORNIA REDWOOD—STANDARD SPECIFICATIONS FOR EASTERN GRADES, 1925; 27 pages mimeo; paper 8½ x 11.  
*California Redwood Assn., Pub., San Francisco.*.....Gratis
- Spruce Northern*—See PINE, NORTHERN.  
*Spruce, Sitka*—See FIR, DOUGLAS.  
*Spruce*—See PINE PONDOSA.  
*Tamarack*—See PINE, NORTHERN.  
*Veneers*—See PLYWOODS.
- BUILDING CONSTRUCTION AND SUPERINTENDENCE (3 Vols.). By F. E. Kidder, C.E., Ph.D., Architect. Revised (1909) by Thos. Nolan, M.S., A.M., F.A.I.A., Prof. of Arch. Construction, Univ. of Pa. Part II, Carpenters' Work. 931 pages; cloth 7 x 9¾; 830 ills. Chap. VIII, pages 742 to 810, incl., covers Specifications on 1. General Conditions; 2, Carpenters' Work, Frame Buildings; 3, Carpenters' Work, Brick Buildings; 4, Gravel Roofing and Slate Roofings; 5, Interior Finish; 6, Cellar Work and Miscel. Details; 7, Hardware (also pages 658 to 667); 8, Heavy Framing; 9, Store Fronts; 10, Painters' Work; 11, Notes on "10."  
*Wm. T. Comstock Co., N. Y., Pub.* .....\$7.00
- TIMBER, ITS STRENGTH, SEASONING AND GRADING. By Harold S. Betts; 234 pages, with lumber specifications.  
*McGraw-Hill Book Co., Pubs., New York* .....\$3.50
- LUMBER AND ITS USES. By Royal S. Kellogg. Rev. by F. H. Smith, with specifications on structural timber.  
*Scientific Book Corp'n., New York* .....\$4.00
- DRY ROT IN FACTORY TIMBERS.  
(See under LUMBER—PINE, SOUTHERN YELLOW.
- FACTORY MUTUAL SPECIFICATIONS FOR LONGLEAF PINE FACTORY TIMBERS  
(See under LUMBER—PINE, SOUTHERN YELLOW.
- REGULATIONS GOVERNING STANDARD MILL (SLOW BURNING) CONSTRUCTION. (See under GENERAL.)
- Millwork:*—  
OFFICIAL GRADES, 1923; single page 6 x 9.  
*Southern Sash, Door & Millwork Mfrs. Assn., Pub., Atlanta.*..Gratis

# THE ARCHITECTURAL RECORD.

STANDARD LISTS OF OPEN SASH, GLAZED SASH, PANEL DOORS, OUTSIDE BLINDS; 1924; 65 pages, 3 x 5¼; paper.

*National Lumber Mfrs. Assn., Pub., Washington, D. C.*....Gratis

*Oak:—*

OAK FLOORING GRADING RULES; 1924; 4-page folder; 3½ x 6¼.

HOW AND WHERE TO USE OAK FLOORS; 1924; 15 pages; paper 3½ x 6¼; 4 ills.; specifications for laying and finishing floors.

*Oak Flooring Bureau, Pub. Chicago* .....Gratis

*Pine, Arkansas Soft:—*

STANDARD SPECIFICATIONS FOR GRADES OF ARKANSAS SOFT PINE LUMBER; Including American Lumber Standard Sizes; 1924; 64 pages; paper 3½ x 6¼; 20 plates of details.

ARKANSAS SOFT PINE HAND BOOK; 1923; 46 pages; boards; 7 x 10¼; 5 ills. and 29 plates of molding profiles, full size; also specifications for finishing soft wood work. *Arkansas Soft Pine Bureau, Pub., Little Rock, Ark.* ....Gratis

*Pine, California White and Sugar:—*

CALIFORNIA WHITE AND SUGAR PINE INFORMATION SHEETS, 1926; 8½ x 11; ills.; in filing folder No. 3, Doors, 6 pages. No. 4, Siding, 4 pages. No. 5, White Fir, Douglas Fir and Incense Cedar, 6 pages. No. 6, Sash and Frames, 6 pages. No. 7, Interior Trim and Mouldings, 4 pages. No. 8, Exterior Trim and Porches, 4 pages. No. 10, Boards and Dimensions, 8 pages. No. 11, Lath, 2 pages.

INTRODUCING "CAL" PINE, Guardian of the Grades, 1926; 50 pages; paper 8 x 10¾; many ills. and details, grading rules.

STANDARD GRADING RULES FOR CALIFORNIA WHITE PINE, SUGAR PINE, WHITE FIR, DOUGLAS FIR AND INCENSE CEDAR, Rev. 1926; 88 pages; paper 3¼ x 5¾; with details and patterns.

*California White and Sugar Pine Mfrs. Assn., Pub., San Francisco* .....Gratis

## 20—FURRING AND LATHING

SPECIFICATIONS FOR METAL LATH CONSTRUCTION; 1923; 16 pages; paper 8 x 11; 7 plates.

*Associated Metal Lath Mfrs., Pub., Chicago*.....Gratis

## 21—PLASTERING

CEMENTS, LIMES AND PLASTERS: THEIR MATERIALS, MANUFACTURE AND PROPERTIES. By E. C. Eckel. (See under CEMENT.)

CONCRETE MASONRY CONSTRUCTION, Suggested Specifications for the Application of Portland Cement Stucco on Concrete Block and Tile Walls, Portland Cement Assn., (See under CONCRETE).

GYPHUM PLASTERS; 24 pages; paper 8½ x 11; "General Instructions and Specifications for Gypsum Neat Plaster; Gypsum Wood-Fibered Plaster, Gypsum Ready-Sanded Plaster, Gypsum Plasters on Concrete Surfaces, Gypsum Finished Plaster, Including Standard Quality Specifications of The Am. Soc. for Testing Materials." *The Gypsum Industries, Pubs., Chicago* .....Gratis

HOLLOW TILE CONSTRUCTION FINISH. By C. E. White. (See under BLOCKWORK.)

LIME STUCCO, Specifications for the Guidance of Architects and Builders; 1922; 48 pages; paper 6 x 9. *National Lime Assn., Pub., Washington, D.C.* .....Gratis

PLASTER AND PLASTERING. By W. S. Lowndes, Ph.B., A.I.A., and D. Knickerbacker Boyd, F.A.I.A., 1924; 90 pages; cloth 6 x 8½; 73 figs. "The methods, materials and tools used in plastering are described." *David McKay Co., Pub., Philadelphia* .....\$1.50

# THE ARCHITECTURAL RECORD.

PORTLAND CEMENT STUCCO SURFACING;  
1926; 27 pages; paper 8½ x 11;  
many ills. and plates. Specifications,  
descriptions, methods of construction,  
finish, color, etc.  
*Portland Cement Assn., Pub.,*  
*Chicago* .....Gratis

STANDARD SPECIFICATIONS; 6-page folder;  
paper 5¼ x 8¼.  
*Contracting Plasterers' International Association, Pub.,*  
*Detroit* .....Gratis

STANDARD SPECIFICATIONS FOR GYPSUM  
PLASTERS. (See under GYPSUM.)

STANDARD SPECIFICATIONS FOR LIME  
PLASTER; 16 pages; paper 8½ x 11.  
*National Lime Assn., Pub.,*  
*Washington, D. C.* .....Gratis

SUGGESTED PROVISIONS FOR BUILDING  
CODES. By Virgil G. Marani, C.E.;  
19 pages; paper 8½ x 11; Gypsum  
Materials:—Tile, Wallboard and  
Plaster.  
*The Gypsum Industries, Pub.,*  
*Chicago* .....Gratis

## 22—MARBLE AND SLATE

THE CHARM OF SLATE FLOORS AND  
WALKS, 1925; 8 pages; paper 8½  
x 29 ills.  
*National Slate Assn., Pub.,*  
*Philadelphia* .....Gratis

NATURAL SLATE FOR BLACKBOARDS;  
1920; 16 pages; paper 6 x 9. "A  
publication for the information of  
architects, school officials, members  
of school boards and the parents of  
children."  
*National Slate Assn., Pub.,*  
*Philadelphia* .....Gratis

SLATE FOR ELECTRICAL USES; Rev.  
1923; 87 pages; paper 6 x 9; many  
ills., tables, data and specifications.  
*National Slate Assn., Pub.,*  
*Philadelphia* .....Gratis

SLATE ROOFS, 1926; 84 pages; paper  
8½ x 11; 140 ills. and details, tables,  
data and specifications. "... to  
supply reliable and definite information  
on slate and its proper application."

.....\$1.50  
*National Slate Assn., Pub.,*  
*Philadelphia* .....Gratis

STRUCTURAL SLATE: (Chap. 2) Basic  
Specifications, 12 pages, 2 ills.;  
(Chap. 3) Stairways, 12 pages, 4  
ills. and details; (Chap. 5) Toilet  
Enclosures, 48 pages, 19 ills. and 24  
plates of details; (Chap. 6) Urinal  
Stalls, 20 pages, 6 ills. and 10 plates  
of details; (Chap. 7) Shower Stalls,  
9 ills. and 15 plates of details;  
(Chap. 8) Laundry Tubs, Sinks  
and Sink Tops, 24 pages, 10 ills. and  
13 plates of details; (Chap. 9) Caps  
—Bases—Wainscots—Floors, 8  
pages, 3 ills. and 5 plates of details;  
(Chap. 13) GRAVE COVERS AND  
VAULTS—MAUSOLEUM CRYPTS, 8  
pages, 5 plates of details; paper  
8½ x 11; Rev. (Chapters separate).  
*Edited by D. Knickerbacker*  
*Boyd, Con. Archt.* .....Gratis

STRUCTURAL SLATE IN WHITE OR ANY  
COLOR, 1925; 12 pages; paper 8½  
x 11; "Stucco Slate, an Innovation."  
*Structural Service Bureau and*  
*National Slate Assn., Pub.*.....  
*Philadelphia* .....Gratis

## 23—FLOOR AND WALL TILE

BASIC SPECIFICATION FOR TILE WORK  
AND RELATED DOCUMENTS, 1924;  
46 pages; paper 7½ x 10¾; information,  
specifications and checking  
index; to "not only afford the basis  
for a better understanding of good  
tile installations in the present but  
be the means of developing further  
improvements in the future." Ed.  
by D. Knickerbacker Boyd, Con.  
*The Associated Tile Mfrs.,*  
*Pub., Beaver Falls, Pa.* .....25c

SPECIFICATIONS FOR TILED BATHROOMS  
AND TILED FLOORS OR WAINSCOTS,  
1920; 11 pages; paper 8½ x 11; 11  
ills.; Edited by Knickerbacker Boyd,  
Con. Archt.  
*The Associated Tile Mfrs.,*  
*Pub., Beaver Falls, Pa.* .....25c

THE ARCHITECTURAL RECORD.

25—PAINT, PAINTING AND FINISHING

ARKANSAS SOFT PINE HANDBOOK, "How to Finish Arkansas Soft Pine."  
(See under LUMBER.)

HOUSE PAINTING. By Alvah H. Sabin; 160 pages; cloth 5 x 7. "A large amount of information about painting . . . is given . . . also tells about varnishing, floor finishing, papering and kalsomining."  
*William T. Comstock Co., Pub., New York* . . . . . \$1.50

REPORTS OF COMMITTEE D-1 ON PRESERVATIVE COATINGS FOR STRUCTURAL MATERIALS, 1914- 567 pages; cloth 6 x 9.  
*Amer. Soc. for Testing Materials, Pub., Philadelphia* . . . . . \$5.00

SUGGESTIONS FOR PAINTING AND DECORATING CYPRESS DWELLINGS AND STRUCTURES WITH PREPARED PAINTS; 8 pages; paper 7 x 9.  
*Southern Cypress Mfrs' Association, Pub., New Orleans and Jacksonville* . . . . . Gratis

WHITEWASH AND COLD WATER PAINT. Preparation and Use Made Easy; 8 pages; paper 6 x 9.  
*National Lime Assn., Pub., Washington, D. C.* . . . . . Gratis

BUILDING CONSTRUCTION AND SUPERIN-

TENDENCE (3 Vols.). By F. E. Kidder. (See under CARPENTRY.)

THE ANALYSIS OF PAINTS AND PAINTING MATERIALS. By Henry A. Gardner and John A. Schaeffer; 100 pages, with paint specification data.  
*McGraw-Hill Book Co., N. Y.* \$1.50

PAINT RESEARCHES AND THEIR PRACTICAL APPLICATION. By Henry A. Gardner, 384 pages with red lead and other specifications.  
*Press of Judd & Detweiler, Washington, D. C.*

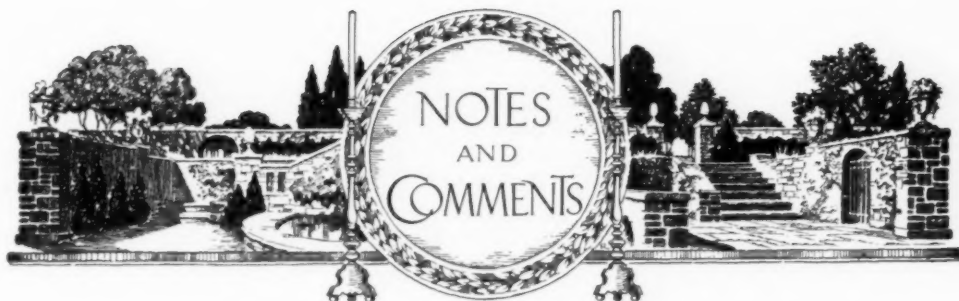
PAPERS ON PAINT AND VARNISH AND THE MATERIALS USED IN THEIR MANUFACTURE. By Henry A. Gardner. Library of Congress, 501 pages.

26—GLASS AND GLAZING

THE LOW COST OF DIGNITY AND BEAUTY, 1925; 32 pages; paper 8x10¾; ills.; has U. S. Govt. Spec's for plate glass for glazing purposes.  
*Plate Glass Mfrs. of Am., Pub., Pittsburgh* . . . . . Gratis

U. S. GOVERNMENT MASTER SPECIFICATION FOR FLAT GLASS FOR GLAZING PURPOSES, Federal Specifications Board No. 123; 1924; 24 pages; paper 3x5½.  
*Issued by glass dealers* . . . . . Gratis

(To be continued in the March issue)



**The Report of the International Exposition  
of Decorative and Industrial Art in  
Paris, 1925**

This report of 103 pages 8vo. consists of critiques of the architecture and industrial arts written by members of the Commission appointed by the Secretary of Commerce, prominently identified with corresponding activities in this country. The report on architecture is singularly inadequate and evidently written with complete lack of sympathy with the movement; the architecture is described as having made little contribution to the art, and is generally regarded as non-significant. In view of the great interest which these buildings stimulated, and the impetus which they have undoubtedly given to the more modern type of design in America, we find this report myopic, to say the least. As a whole the publication contains little constructive or analytical criticism and is of small value as a work of reference.

Now that the acute interest in the probable status of the new manner has in a measure subsided, we become able to gauge the extent to which future decorative invention will be influenced thereby; certain broader points of view and signs begin to obtrude themselves upon our consciousness, which were missed in the initial emotion of surprise. The most important fact is, that craftsmanship is shown in the Exposition to be operating upon a totally different basis to that which prevailed in similar collections in the past; in practically all major conditions of association a complete change of front is apparent.

A theory has prevailed up to the present time to the effect that the calling of craftsmen was not advantageously followed in isolated workshops or communal groups. As the monastic studios of the Middle Ages

and the Guilds had been identified with peculiar conditions in environment, it was assumed that the most obvious solution to the problem was to reconstruct mediaeval systems and similar economic relations. Effort was centred upon exploiting manipulative peculiarities inimical to each worker, and in the first of these movements instituted by William Morris, socialistic principles were adroitly utilized with the purpose of separating the workers from normal industrial contacts. His aim was to impress each object made with the manual identity of the worker; multiplication by any mechanical method was anathema; the machine an invention of the devil, and craft activity made to enter even into the preparation of raw material. In such cases as the printer's trade, when reproduction was inevitable, Morris believed that the craftsman should atone by making his own paper and ink, setting up his type, printing each page upon a hand press, and finally binding and tooling by hand. The entire system was economically impracticable with any other individual than Morris, who in addition to substantial private means, was a shrewd business man, a genius in advertising, and a subtle salesman.

All the craftsman movements of the later nineteenth century were productive of undoubted benefit, as they occurred at a period when industrial interests regarded any form of artistic activity with complacent contempt; but they did much to retard the rapprochement of designer and the industrialist which is so noticeable in the Paris Exposition. Quantity production and standardization were eloquently argued against as fatal to quality in treatment; a strong feeling of mutual antagonism encouraged between craftsman and manufacturer; this resulted in discrimination by the manufacturer against all forms of progressive dec-



## THE ARCHITECTURAL RECORD.

Bureau of Printing  
and Engraving

Bridges which destroy a view  
down the Potomac contemplated  
when the White House was built



The Washington Monument  
(Base concealed by apartment)

Army and Navy Building  
with 14 ugly prongs projecting  
560 feet into the Park

Site of proposed  
Roosevelt Memorial  
on banks of Potomac

The Lagoon  
bordered by avenues  
of young elms

orative treatment, as typifying principles in complete antagonism with the fundamentals of economic existence.

But the ideals and standards in craftsmanship were convincingly stated, and seeds of these withered growths now germinate in the much despised factory. A curious condition has resulted, in that these pioneers of treatment have become the greatest artistic benefactors of that form of activity which they would willingly have destroyed. The change of heart in industry with regard to design does not proceed from an altruistic impulse, but from one which is infinitely more solid and significant. This sudden interest in decorative excellence is a policy of expediency, compelled by the extraordinary improvement in public taste and the economic value of artistically treated goods. In Paris we find the creations of the most progressive designers associated with great industrial institutions; it is the industrialist who now takes the risk in innovation, not the solitary individual laboring in comparative obscurity.

With artistic treatment in production becoming a very important feature in industrial enterprise, the necessity arises for some form of systematic control when selecting untried decorative development. The public of to-day is in receptive mood for innovation; but the introduction of novelties by great industrial organizations involves very considerable financial issues, and the necessity for systematic observation of the trend of taste. By far the most valuable and interesting report in the book dealing with this subject is by Henry Creange, entitled "Quantity Production in Art Industries." His extensive experience in art direction gives him every possible contact with the artistic and the economic problem, and he

shows convincingly the advantages which the designer must derive through information which statistical methods alone can procure him for guidance. He deals with systematic procedure in the selective process which is necessary to provide for all phases of demand in a large and progressive industry, the anticipation of change, and the development of promising treatments into staples. He explains his Three-phase System for selection and observation which, in view of the radical changes which we have briefly described, is an invaluable contribution. Mr. Creange's essay is full of constructive suggestion and fact; as the new movement is characterized by deliberate departure from all precedent, data of such description will serve as ballast and prevent that loss of energy and effort which usually penalizes untested impulses.

In the educational system undertaken by the French schools of applied art there is a significant change in policy, and every evidence that the generation now in training is being fully advised of the vital necessity for subjecting imaginative activity to technical expediency and commercial demand. This complete change in craft relations, the connection of the designer, and the direction of education are convincingly demonstrated in the Exposition; if no other result were to accrue, these reassuring facts alone would make the enterprise justifiable.

LEON V. SOLON

### Pictures from My Window

South, in its classic dignity, stands the Lincoln Memorial, isolated and exalted by lawns and foliage. The reflected lights and contrasting color of the Potomac separate it from the green Virginia hills, which form the background of a charming picture.



# THE ARCHITECTURAL RECORD.

Departmental sheds marring  
important view from the  
Mt. Vernon Highway

The Virginia Hills

The Amphitheatre  
and Tomb of  
Unknown Soldier  
on crest of hill

Arlington Mansion  
on the hillside



The Lincoln Memorial on  
the shore of the Potomac

Derricks mark the laying  
of foundations for the  
Memorial Bridge

South Naval Hospital  
grounds

East, the Washington Monument rises into the sky. Its simple silhouette dominates the apartment house that conceals its unfinished base.

West, Arlington House, across the Potomac, nestles in the trees on the hillside. Once the home of Custis and Lee, it is now surrounded by the tombs of thousands who died for their country. The growing trees are rapidly encroaching upon and may destroy this historic view. Let us remember the tomb of L'Enfant in the shadow of Arlington, overlooking the city which he planned.

The great ugly steel bridges, which destroy a charming contemplated view down the Potomac from the White House, obtrude between the Memorials in the distance. In the middle distance, with these depressing structures as a background, one can see the site of the proposed Roosevelt Memorial. In the foreground obtrude the roofs of the ungainly army and navy buildings erected in the hysteria of the war, projecting over five hundred feet brazenly and inexcusably into the Park. These buildings are a reflection upon the taste and culture of our generation. It is true as Emerson says: "The fine arts have nothing casual, but spring from the instincts of the nations that created them."

A bridge connecting the Lincoln Memorial with Arlington was a major element in the Park Commission Plan. The derricks rising from the river signify that the foundations of this bridge (after twenty-five years) are being placed. The view beyond the bridge site is seriously marred by many sheds erected on the Arlington low grounds by the Agricultural Department. This jarring note, which will become more and more

conspicuous as the memorial bridge nears completion, spoils attractive views, from the Mount Vernon highway, of the Arlington Mansion and of the new marble Amphitheatre.

We see, rapidly growing, formally planted elms which border the silvery lagoon. They form avenues which limit the width of the magnificent vista over the mirror like water between the great memorials. The people are now able to appreciate the beauty and dignity of this reciprocity of sight between these great tributes to Washington and Lincoln. Glimpses of the sunlight may be caught from time to time as it is reflected through the trees from the clear water of the lagoon.

The daily sight of the Lincoln Memorial revives interesting memories of the past twenty-five years. The most vivid recollections recall the strenuous battles to obtain and maintain artistic effects in Government Parks and Buildings. The Park Commission Report, Jan. 2, 1902, was a noted event in the artistic world. It presented a definite plan for an artistic landscape treatment of Parks, and a dignified practical scheme for grouping public buildings. It gave the first suggestion of a design and a location of a Lincoln Memorial, around which structure memory clings. The memorial recalls twelve years warfare, skirmishes and pitched battles of the artistic and cultured to prevent a change of site. The enemies were led by the able Joseph Cannon, an opponent to be respected and feared. I am glad to say after the memorial was finished he expressed his pleasure at having lost his campaign. The persistent opposition of one of Washington's strong daily papers was a constant source of irritation. Most strongly impressed

upon the mind, however, are the victories won in face of predicted and apparently certain defeat.

The first battle was fought against powerful interest strongly supported in Congress to place the Memorial on Capitol Hill and make it an addenda to the Railway Station. The opposition of the press and the people against using the Memorial to glorify the Station awed Congress and won the victory. We were nearest defeat when the nation-wide Motor and Roadway Associations combined with manufacturers and local real estate interests to grasp the appropriation to build a Lincoln Appian Way to Gettysburg, as the advocates called it. This measure was so popular in and out of Congress that hope waned, although we kept at our guns. What saved the day was Senator Elihu Root's strong speech showing clearly the purely selfish interests of the Roadway advocates, followed by the testimony of Col. W. V. Judson, U. S. Engs., showing that the roadway they exploited would cost thirty million dollars and require five millions annually for maintenance. The evidence of selfish manipulation and the enormous cost of construction and maintenance caused the defeat of the measure in the House.

Pleasing memories, not of strife, justifying the design and location by the Park Commission occurred when the Memorial was dedicated and when Henry Bacon, the architect, was honored by a pageant and the gold medal of the American Institute of Architects.

The artistic phases of the memorial as seen in the changing conditions of light and atmosphere are ever a source of pleasure.

From my window I see a white octastyle colonnade in front of an unbroken cella wall. The sharp shadows in the bright sunlight add to the brilliance of the white marble memorial. In the rays of the rising sun, imagination sees a delicate ivory edifice. Reflecting the moonlight, a soft velvety white temple appears before our eyes. In the mist, indefinite, hazy, ethereal, we see a structure of dreams. Through the rainbow fountain, a fairy palace glittering with diamonds is materialized. The sombre reflections of the thunder storm are forgotten in the thrill produced when the sun's rays break through the dark clouds and encircle the memorial in a halo of light.

Ever changing, this tribute is always a patriotic inspiration arousing admiration for the great man whom it commemorates.

GLENN BROWN.

### Chicago, 1933

Chicago plans to celebrate the hundredth year of its existence by means of a huge World's Fair to be held in 1933. Initial steps calling for a demonstration on a magnificent scale have been ratified by the City Council and Mayor Dever has appointed E. N. Hurley, former Chairman of the U. S. Shipping Board, head of a prominent Citizen's Committee, to devise and recommend ways and means. A grand opportunity is at hand for the preparation and execution of a general scheme which will not only provide for the temporary needs of the coming exposition but which will result in lasting benefits to the city's development and future growth.

Here in Chicago work and live the polyglot people of democracy animated by that dauntless spirit of "I will," the parent of achievement. There exist amongst us individuals of rare intelligence, possessing vision and keen imagination and capable of rising to the high places, while the mass is composed of uneven and unstable mentalities fired by the will to do, always ready to give their natural impulses free course and thereby rush to violent extremes unless checked and controlled by able leaders who can divert their effort along beneficial lines. Unanimous support of a civic enterprise is seldom lacking, for deep down in the native's heart is the feeling that Chicago is destined to be the greatest city in the world.

Looking back a little over seventy years ago, when Brigham Young and the Latter Day Saints occupied the City of Nauvoo in Southern Illinois, with a population of ten thousand souls, Chicago was nothing more than a village or trading post with a scattered settlement of about thirty-five hundred people. Today, after a phenomenal growth unequalled in the world's history, Chicago goes advancing merrily onward, getting bigger and better, boosting, boasting, striving, hustling and throbbing with an energy which is the very backbone of the city's greatness.

Now comes the crowning event with the inaugural set for 1933, six years hence. What a chance to accomplish something really worth while!

The Chicago plan, with its "City Beautiful" slogan, has gone far in actual achievement along well organized lines based on a comprehensive general plan. Lincoln Park has acquired thousands of additional acres of Parkland by accretion and fill along the North Shore, and the South Park system has likewise added a vast territory along the South Shore and to Grant Park directly in front of the business district or "loop"; yet what is sorely needed before the city can honestly

claim its place in the sun is a system of fixed bridges across the Chicago River. And this can only be done when Chicago provides a great commercial harbor adequately protected, with docks and warehouses appropriately arrayed, where lake tonnage may rapidly and economically transfer its cargo for down river destination on lighters designed for river traffic. A glance at a soundings chart will reveal the fact that directly Lakeward one and one-eighth miles beyond the shore of Grant Park and at the mouth of the Chicago River there exists a natural submarine ledge running north and south, approximately twenty-eight feet, below the water's surface.

Upon this ledge may be built a huge island extending from Roosevelt Road to Chicago Avenue, which will provide a site for the temporary and permanent buildings of the coming World's Fair, and at the same time provide ample dockage and anchorage for future needs, thereby creating a grand commercial basin for a front yard with its island landscape as seen from Grant Park silhouetted against the lake horizon as a sheltering barrier.

After the Fair the temporary buildings, unless designed for definite utilitarian uses, can then be dumped into the lake for additional fill and the entire grounds acquired for recreational and public institutional purposes.

As part of the general scheme, Grant Park could be made useful as well as ornamental by making it a vast underground parking space for automobiles with inclines to the surface also acting as portals to the various tunnels carried under the harbor basin, connecting the mainland with the exposition island. Thus worker, shopper, and visitor may be shuttled back and forth in limitless numbers without disturbance to the city's normal activities, and eventually the community can derive sufficient income from parking space alone to pay for the entire improvement. The coming exposition should prove sufficient incentive for great deeds.

What remains of the buildings erected during the World's Columbian Exposition of 1893? Nothing but the wormy, crumbling old Fine Arts building which for a time housed the Field Museum until it was necessary to provide other quarters for the exhibits because they were being rapidly destroyed by vermin and the elements.

Now the old timers, after working up the glib sentimentalist, are about to save the old Fine Arts for the future generations of Chicago by putting its exterior shell in permanent material at a cost of six million dollars of the public's money. Might not this sizable fund, sponsored by the dreamers of the past,

be diverted to advantage as the first drop in the bucket toward the dream of a future to be dedicated in 1933? Likewise, the three or more millions of dollars about to be expended on a new aquarium in Grant Park, together with funds available for civic opera and other public building, might be pooled in an all-embracing enterprise where permanent and appropriate sites are obtainable for the making.

Exhibition buildings, whether temporary or as monuments placed in Grant Park at the toes of Michigan Avenue's ever-increasing skyline, can never reach grandeur of scale, no matter how costly the outlay. In order to arrive at true proportion, bearing relative beauty, they should be placed in their own surroundings, preferably on an island, where the picture may be viewed to advantage in colorful and just scale, possessing real architectural significance.

Necessary funds for a vast civic island building enterprise, primarily to accommodate the Fair but with far more lasting public future benefits in sight, can be readily raised by the prominent men in charge of the preliminary plans. Let us hope this golden chance will be fairly grasped and ensuing results be in keeping with the opportunity at hand.

Six years seems a long way off. Yet time taken full advantage of should pay in a large measure of success.

Thus the dream of Chicago as a mighty inland harbor with a bustling lake-to-gulf traffic may be realized. Great ships will ride at anchor or lie snug against quay or dock in the evening shadow of the city's skyscrapers, while flat bottom boats of the latest type will busily exchange cargo for the down river and gulf traffic. And the Chicago River bridges will be fixed for all time.

A. N. REBORI

### Third Pan-American Exposition of Architecture, Buenos Aires

The date of the above Exposition coincides with that on which the Third Pan-American Congress of Architects will meet, namely from July 1st to 10th, 1927.

The organizers wish to make this Exposition a demonstration of the architectural achievement of all countries in America and of the new tendencies of their Schools.

Exhibits will be arranged in (1) Architects' Section, including projects for various types of public and private buildings and monuments, city planning, etc., (2) Section of Public and Private Institutions and (3) Students' Section. Awards in Sections (1) and (2) will be made by a "Prize Jury" composed of fifteen members representative of

the different nations taking part in the Exposition and in Section (3) by a "University Jury" of Professors of Architecture from the nations participating.

Exhibits should be in Buenos Aires before June 15, 1927. The programme and further information may be obtained from the Presidente de la Comisión de Exposición, Arquitecto Arnoldo Albertolli, Calle Piedras 80, Buenos Aires, Republica Argentina.

### Decorative Iron Work

During the five years previous to the war, we saw, in various architectural lines, a great revival of interest in decorative and wrought iron work. So much so, in fact, that there is now evident in the antique shops of Italy and France a noticeable dearth of art objects of this kind, where, not many years before, they were so plentiful. It seems, therefore, a fitting time to search some of the world-famous museums and study the designs of the various good iron pieces which we find there, to inspire and aid us in creating such pieces of new design, necessary to supply the present demand, which we find we are unable to fill from the stock on hand in the antique shops.

While torchères and wall candle brackets were the principal means by which the note of iron was brought into the furnishings of the houses of the past, we have been making, during the last few years, many other pieces of furniture in iron, with very good and attractive results. Iron console tables and mirror frames are very often placed to good advantage in our modern decorative schemes, but, as of old, iron pieces, generally, are confined more to purely ornamental and less practical subjects, as floor and table lamps, wall brackets, flower stands, etc. For this reason alone, in order to make these pieces really decorative, we should consider the forms, lines and proportion of the old works we find at our disposal, that we may get the best results possible in our new creations. An interesting custom, used several centuries ago in different countries, of installing low iron gates between rooms at door openings, has recently been revived and has found much favor in some of our modern city and country homes, especially those carried out in the now-popular Italian style.

Even in our museums, we are not entirely lacking in iron pieces of good design. For instance, in the Cooper Institute Museum is an old Italian torchère of very interesting lines and detail. This, by the way, has probably been reproduced oftener and by more different people than any one piece of dec-

orative furniture, in this country at least.

The Victoria and Albert Museum of London has probably the finest collection, in point of quality and quantity combined, of any museum in the world. Here we find brackets, for instance, in the old different styles and periods, and a comparative study of the designs of the various countries represented is thus possible and most interesting and instructive. On the other hand, there is a noticeable scarcity in this exhibit of old torchères.

The French people of earlier days did not seem to show the same interest in using iron for purely decorative work, but rather confined their efforts along lines to more practical purposes, as balustrades, grilles, and door panels on the interiors, while the exteriors of both small and large buildings have always been decorated more or less with ornamental balcony railings of good design. In other words, they have combined the beautiful with the practical and brought about most pleasing effects. For instance, the iron balustrade of the main staircase in the Louvre Galleries and the gates and grill-work leading from the Place de la Concorde to the Tuileries are truly beautiful.

Accompanying this article are sketches of old pieces seen in museums during a tour made through England, France and Italy. Figs. 1, 2 and 3 are brackets taken from the Victoria and Albert Museum, (commonly called the South Kensington) showing a sample of the different periods—English, French, and Italian. While the familiar lines of the scrowl are generally adhered to in each to a certain extent, yet it is interesting to see how differently the ornamental members are applied in each case, making the finished effect quite different. After all, most good iron designs have the scrowl for their backbone, and to this, lines of other forms are added. In these examples, the design of the English bracket follows more closely than the others the natural lines of the scrowl, although the final member is broken and reversed. The lines of the scrowls of the French bracket are somewhat the same in that the scrowl is broken and reversed, and yet see how different? In the Italian design, we find the scrowls broken in three different ways, and then continued on without reversing. It is interesting to note the different manner of breaking these scrowls. One comes directly to a point; another has a short straight section before continuing, and the third seems to start to complete the original scrowl, stops suddenly in a point, and continues on without reversing.

THE ARCHITECTURAL RECORD.



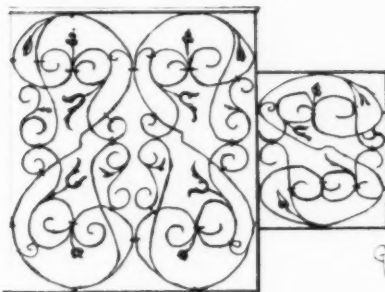
English-18 Cent.



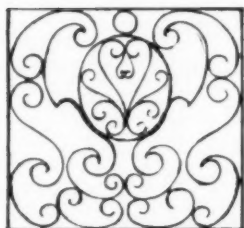
French-18 Cent.



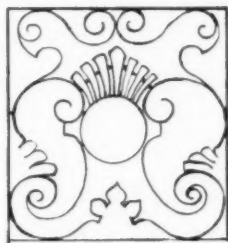
Italian-17 Cent.



German-17 Cent.



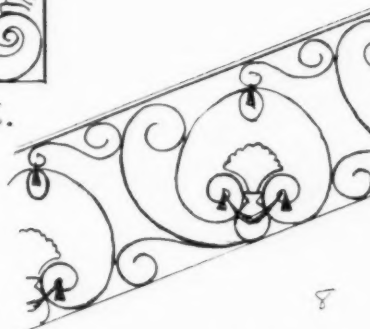
French.



Venetian.



Modern French.



Modern French.

7.  
An illustration of the old interior gates, as referred to above, is shown in the sketch of the 17th century German screen and gates. (Fig. 4) That also, as you see, follows the general lines of the scrawl for its main line, and interest is added, while making it more unusual, by the uneven, freehand manner in which it is done. This same crude handling of the design is carried out in the execution of the work, and the result is very interesting. The design of the French panel, (Fig. 5) taken from the *Musée des Arts Decoratifs*, is a study in combination of scrowls around a circular panel, also filled with scrowls. In this design, we can distinguish the complete

scrawl, the reversed scrawl, the broken scrawl, and the circle. The design of the grill or balcony railing from a house in Venice is interesting because it uses forms for adding ornamental details different from those used in most other styles, while the scrawl forms are still the nucleus of the main design. It will be seen that Fig. 7 on the accompanying sheet, a design for a decorative panel, suggests the Oriental, while in Fig. 8, a design for a balustrade, Classic lines prevail. These two designs are typical illustrations of the tendency shown in modern French art.

RANDOLPH W. SEXTON





### Spanish Missions of the Old Southwest\*

Toward the end of the fifteenth century Spain emerged victorious from seven centuries of religious war. At this moment of released energy a new world was placed in her hands inhabited by millions of heathen. The missionary fervor of that era burned on for three centuries. The missions of Texas, New Mexico, Arizona and California, nearly all planted by Franciscan Friars, were outlying frontiers of the movement. The priest and soldier went exploring together; the idea was political as well as religious—to create a great Spanish empire with a native Indian peasantry under Spanish overlords. Most of the Colonists came expecting to secure estates with native laborers. The California settlements came late—the latter part of the eighteenth century. The first missions in New Mexico were 1598. The great rebellion of 1680 swept them almost out of existence, but they soon came back. They swarmed along the valley of the Rio Grande; San Gabriel de Guevavi in Arizona was established in 1690; Ysleta in Texas in 1682. All three states were colonized before Virginia.

The term mission is now popularly applied to the church only, because being more substantial it has survived nearly everything else; but a mission, especially in California and Texas, was usually a large community, numbering hundreds or even thousands, industrial as well as agricultural. The substantial church was built as soon as enough Indians had been collected to perform the manual labor. The work done was not only conversion but education, and to transform the natives into farmers and craftsmen.

Many of the mission sites quickly proved attractive to white settlers, and cities grew up bearing the mission names. In New Mexico the Indians were already living in compact communities called "pueblos."

In regard to the treatment of the Indians the record of the padres and of the Spanish home government is honorable to both. They constantly—but often unsuccessfully—strove to protect the natives against the tyranny of governors, soldiers, settlers and adventurers of all kinds, who were far away from the central authorities and only slightly under the padre's control. The theory of the home government was that the Indians could be civilized in about ten years; then they were to become subjects and citizens of Spain, and be given their lands and equipment, while the mission was to be turned into a parish. The padres thought it would take several generations. One governor of California thought ten centuries more likely. But undoubtedly there was very respectable progress. It is doubtful if any attempts of white men to benefit the Indians were as disinterested and successful as those of the Spanish friars. The whole enterprise faded away after the establishment of Mexican independence, and the Indians generally relapsed.

One is tempted to write here at large on the historical and social side of the missions, because Mr. Hallenbeck's text is full of curious interest, and better than his plates. Moreover, there is no list or index to the plates. The only way to find one is to hunt up one of the maps. The missions on the maps are meant to be numbered to correspond with the plates, but some of them do not correspond, and in any case the method is awkward.

The Spanish friars were as a rule men of culture, most of them university trained, and apparently architects themselves of no mean ability. Mr. Hallenbeck is not an architect and does not intend to discuss mission architecture in any detail. He notes that the mission churches of the Southwest may be divided into two groups: Those of New Mexico which seem to be based on Pueblo Indian building and might be called "Pueblo-Mission"; and those of Texas, Arizona, and California, which he would call "Moorish Mission." Modern resi-

\*Spanish Missions of the Old Southwest. By Cleve Hallenbeck. Doubleday, Page & Co. \$7.50.



MISSION CHURCH AT RANCHIAS DE TAOS, NEW MEXICO  
Illustration from *Spanish Missions of the Old Southwest*

dential architecture in each state is tending to follow that of its local mission type.

He rather overstates the Moorish element, and his title "Moorish-Mission" is accordingly misleading. "Spanish-Mission" would be better. It is Spanish, and, like Spanish, has some characteristics discernible enough as of Moorish origin and others that are not. To call Spanish architecture "predominantly Moorish" is quite uncritical. In running through Mr. Hallenbeck's plates of these missions the distinctly Moorish elements seem on the whole rather slight. Those belfrys and baroque façades have nothing Moorish about them. A great deal of it is such plain solid building with plastered surface as one finds all around the Mediterranean. It is often peculiarly massive because it is built of adobe. That the finest of the missions "could be set down in Algiers or Morocco without seeming alien or out of place" I should think very doubtful. It might be true of the simpler ones, for old Mediterranean architecture of the simpler sort has much in common. The arch over the entrance of the Espada, Texas (Pl. 18-B.) looks Moorish, but nothing else about the church outside or inside suggests it.

Many of the churches are cruciform, but most of them consist of one long room with an-

nexes. The width was limited to thirty-five feet, or less, because roof beams of greater length could not easily be procured.

The most notable church in Arizona is perhaps San Xavier del Bac. This mission was founded in 1700, and the present church dates from 1785. In California the best architecturally, and in good preservation, is probably San Luis Rey; in Texas San José de Aguayo. The last is one of an interesting group of missions on the upper reaches of the San Antonio River: San Antonio de Valero (The Alamo, familiar to our school histories of events preceding the Mexican War), San José de Aguayo, Nostra Señora de la Concepcion, San Juan Capistrano (lately restored) and San Francisco de la Espada. The New Mexican churches, being developed out of pueblo architecture, might have a better claim than any other style to the title of purely American architecture. The museum in Santa Fé is a replica of six of these churches.

Mr. Hallenbeck's book is perhaps not as valuable for architects as it might have been, but for the general reader and student of this more or less neglected subject, it is full of interest. The buildings are becoming more familiar to an age of automobilists. Mr. Hallenbeck gives an Appendix of practical directions





*The Architectural Record*

*February, 1927*

FAÇADE OF THE SAN XAVIER, ARIZONA  
 Illustration from *Spanish Missions of the Old Southwest*



*The Architectural Record*

THE SAN ANTONIO DE VALERO (THE ALAMO), TEXAS  
Illustration from *Spanish Missions of the Old Southwest*

*February, 1927*

about getting there, and another Appendix to legends. An old deserted mission in the southwest is perhaps the most romantic ruin in America.

ARTHUR W. COLTON

**The Elements of Dynamic Symmetry.** By: Jay Hambidge. New York: Brentano's, 1926. 3rd ed. xx. 140 pp. Ill. diagrs. 6¼ x 9 in. Cloth. \$5.00.

Dynamic symmetry is the law of proportion discovered by Jay Hambidge in plant and shell growth and later found to have been used by the ancient Egyptians and Greeks in their works of art. These principles were reduced by him to a scheme for the proportioning of areas and are being used with amazing results by many artists and teachers of art.

**Cottages: Their Planning, Design and Materials.** By Sir Lawrence Weaver, K.B.E., F.S.A., Hon. A.R.I. B. A. New York: Charles Scribner's Sons, 1926. 1st ed. (3rd ed. of "Country Life" Book of Cottages.) xii. 402 pp. Ill. 5¾ x 9 in. Cloth. \$6.00.

Many pre-war cottages have been cut out of this edition in favor of post-war types. The references to suburban cottages and town planning in relation to them have been expanded, and much new matter introduced on new materials and present methods of construction.

**The Early Architectural History of the Cathedral of Santiago de Compostela.** By Kenneth John Conant. Cambridge, Mass. Harvard University Press, 1926. 1st ed. xii. 64 pp. Ill. (part colored.) Plates and plans. 87½ x 12½ in. Bound in Boards. \$5.00.

"The plan drawn up and presented here," says Mr. Conant, "is the first complete plan to be made, while some of the material in the accompanying elevations and sections . . . is newly discovered."

**The City We Visit: Old Philadelphia.** By Anna Robeson Burr. Philadelphia: J. B. Lippincott Co., 1926. 1st ed. 44 pp. Ill. 4½ x 7½ in. Paper. 50c.

The official book of the Women's Division of the Sesqui-Centennial.

#### RECENT PUBLICATIONS

issued by manufacturers of construction materials and equipment

[These may be secured by architects on request direct from the firms that issue them, free of charge unless otherwise noted.]

**"Peerless" Industrial Heating Unit.** For heating industrial buildings, factories, mills, garages, etc. Advantages and diagrams of unit together with steam pressure of the different sizes. Peerless Unit Ventilation Co., Inc., Skillman Avenue and Hulst Street, Long Island City, New York. 6 x 9 in. 4 pp. folder. Ill.

**Surfacing Concrete with "Con-Tex."** Booklet explaining method of using Con-Tex and detailed explanation of the various processes and their value. Specifications for the different qualities. Concrete Surface Corporation, 342 Madison Avenue, New York City, 8½ x 11 in. 28 pp. Ill.

**Building with Assurance.** Price Supplement, 2nd edition for April to July 1926. No. 17. Prices of millwork in standardized designs and stock sizes. Morgan Millwork Co., 113-119 W. North Ave., Baltimore, Md. 4 x 8 in. 136 pp. Ill.

**Southern Yellow Pine Floors.** Technical Bulletin No. 2. A. L. A. File No. 19-e-9. Finish and care of floors with specification and design information and data for the use of architects and engineers. Southern Pine Assn., New Orleans, La. 8½ x 11 in.

**"Quick Meal Gas Ranges."** Catalogue No. 138. Illustrating the latest ranges equipped with Lorain even heat regulator, with full description and dimensions of each range. Illustrations and particulars of laundry stoves and water heaters. Quick Meal Stove Co., Div. of American Stove Co., 825 Chouteau Ave., St. Louis, Mo. 6½ x 9¼ in. 28 pp. Illustrated.

**Unit Heating and Ventilating.** "Heat-ovent system." Bulletin 123. Illustrating individual heating and ventilating for schools, etc. Buckeye Blower Co., Columbus, O. 8 x 10½ in. 14 pp. Illustrated.

**Painting, Varnishing, Enameling.** "Architect's Specification Manual." Giving information on suitability of paints, varnishes and similar finishing materials for various classes of work, with explicit specifications for their application. Oakley Paint Mfg. Co., 711-737 Antonia St., Los Angeles, Cal. 9½ x 11½ in. 36 pp.

**Gas Furnaces.** "Payne Gas Furnaces." Catalogue 22-A, 1925. Payne Furnace & Supply Co., Inc., Los Angeles, Cal. 7¼ x 10¼ in. 116 pp. Illustrated.

**Gas Heating.** "Payne Unit System." Gas heating at its best. Booklet issued by Payne Furnace & Supply Co., Inc., Los Angeles, Cal. 7¼ x 10¼ in. 20 pp. Illustrated.

**Mortar.** "'1-2-9' Cold Weather Mortar." Dealing with mortar for winter work. National Lime Association, 918 G Street, N. W. Washington, D. C. 6 x 9 in. 7 pp. Illustrated.